RAILWAY DEPARTMENT

GOVERNMENT OF INDIA

RAILWAY BOARD

Railways in India

Administration Report for the year

1920-21

VOLUME I

(APPENDICES)

SIMLA
GOVERNMENT CENTRAL PRESS
1922

Price—Rs. 3/8/0.

Statement showing the attendance of patients treated, the income and the expenditure of the undermentioned hospitals and dispensaries during the year 1921–1922.

Name of Hospital.	Total number treated.		Average daily attendance.		Percentage of deaths to total in-door treated.	Income.									Expenditure.																										
	In-door.	Out-door.	In-door.	Out-door.		From Subscription, etc.			From Government			From Municipality.			Establishment.			Diets.			European Medicines.			Bazaar Medicines.			Miscellaneous.			Repairs to buildings, etc.			Total.								
						Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.						
Kalyani Hospital ...	736	8,846	17	83	1·5	20,294	13	3	...	...	...	1000	0	0	8,971	1	7	923	13	10	2,019	9	3	...	...	...	2,701	1	9	6,293	13	8	20,909	8	1						
Calavala Cunnan Chettiar's Free Ayurvedic Dispensary	...	1,13,124	...	310	...	6,433	14	10	...	...	...	100	0	0	3,539	0	9	...	...	...	...	...	...	1,982	1	0	237	5	9	660	0	0	6,418	7	6						
Venkataramana Dispensary	...	65,384	...	180	...	20,678	0	1	...	...	...	...	...	...	6,336	13	10	...	...	...	245	5	0	4,512	5	8	66	12	8	10,750	9	9	21,911	14	11						
Sree Kanyaka Paramesvari Ayurvedic Free Dispensary	...	27,952	...	161	...	4,397	12	1	...	...	...	500	0	0	2,964	2	10	...	...	...	...	...	...	1,549	8	4	384	0	11	...	...	...	4,897	12	1						
San Thome Dispensary ...	...	11,211	...	67·3	...	920	4	6	...	...	...	1,480	0	0	874	2	0	...	...	...	23	7	6	25	15	4	1,168	10	5	160	0	0	2,255	3	3						
St. Thomas Convent Dispensary ...	400	6,306	12	249	4	2,861	0	0	...	...	...	300	0	0	1,636	0	0	693	0	0	355	0	0	62	0	0	185	0	0	230	0	0	3,161	0	0						
Raja Sir Ramaswamy Mudaliar Lying-in-Hospital ...	2,042	4,150	39·88	25.08	0·83	1,946	14	0	200	0	0	36,749	14	1	5,901	11	0	9,203	4	0	3,406	1	5	1,719	3	2	15,078	8	6	3,588	0		38,896	12	1						
The Madras Ayurvedic Free Dispensary ...	...	19,391	...	53	...	951	7	0	...	...	...	1,000	0	0	1,379	4	9	...	...	...	...	...	...	1,561	15	0	804	5	10	300	0	0	4,045	9	7						

Printed by S. Murthy & Co., Madras.

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GOVERNMENT OF INDIA

MINISTRY OF RAILWAYS

(RAILWAY BOARD)

Report by the Railway Board

ON

INDIAN RAILWAYS

FOR

1947-8

Volume I

PUBLISHED BY THE MANAGER OF PUBLICATIONS, DELHI.
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1949

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2200

1962
PRINTED IN INDIA BY THE MANAGER GOVERNMENT OF INDIA PRESS
SIMLA FOR THE MANAGER OF PUBLICATIONS CIVIL LINES DELHI

Systemic Diseases	Abscess of the liver	...	...	...	...	20	...	20
	All other diseases of the liver	12	37	56	11	265	20	401
	Appendicitis	...	...	5	...	1	5	11
	All other diseases of the digestive system	86	2,400	2,968	834	6339	125	12,752
	Inflammation and suppuration of the lymph glands	66	49	37	21	633	120	926
	Goitre	...	...	...	...	...	2	2
	Brights disease	6	5	137	3	268	19	438
	All diseases of the urinary system ...	38	34	207	95	559	114	1,047
	Hydrocele	21	50	...	...	468	...	539
	Other diseases of the generative system ...	316	109	3,131	784	1276	890	6,506
	Diseases of the organs of locomotion ...	214	97	77	...	466	6	860
	Diseases of the connective tissue ...	309	221	447	41	3,084	339	4,441
	Ulcers	164	756	487	36	2,1[illegible]9	354	3.976
	Other diseases of the skin	564	1,092	1,717	72	3,515	702	7.662
	All other local diseases	505	...	537	7	2	471	1,522
General and Local.	Injuries (General and Local)	414	402	353	2	5.153	292	6,616
	Poisons: By Opium	...	...	3	...	6	...	9
	Poisons: By other poisons	...	142	...	...	6	...	148
	Labors: Normal	...	...	451	951	...	231	1,633
	Labors: Abnormal	...	...	312	437	...	36	785
	Total ...	8,209	11,163	17,112	5,918	57,323	8,343	1 08,068
	Operations	311	595	4,188	144	3,331	336	8,905

Statement showing the attendance of patients treated, the income and the expenditure of the undermentioned hospitals and dispensaries during the year 1919–1920.

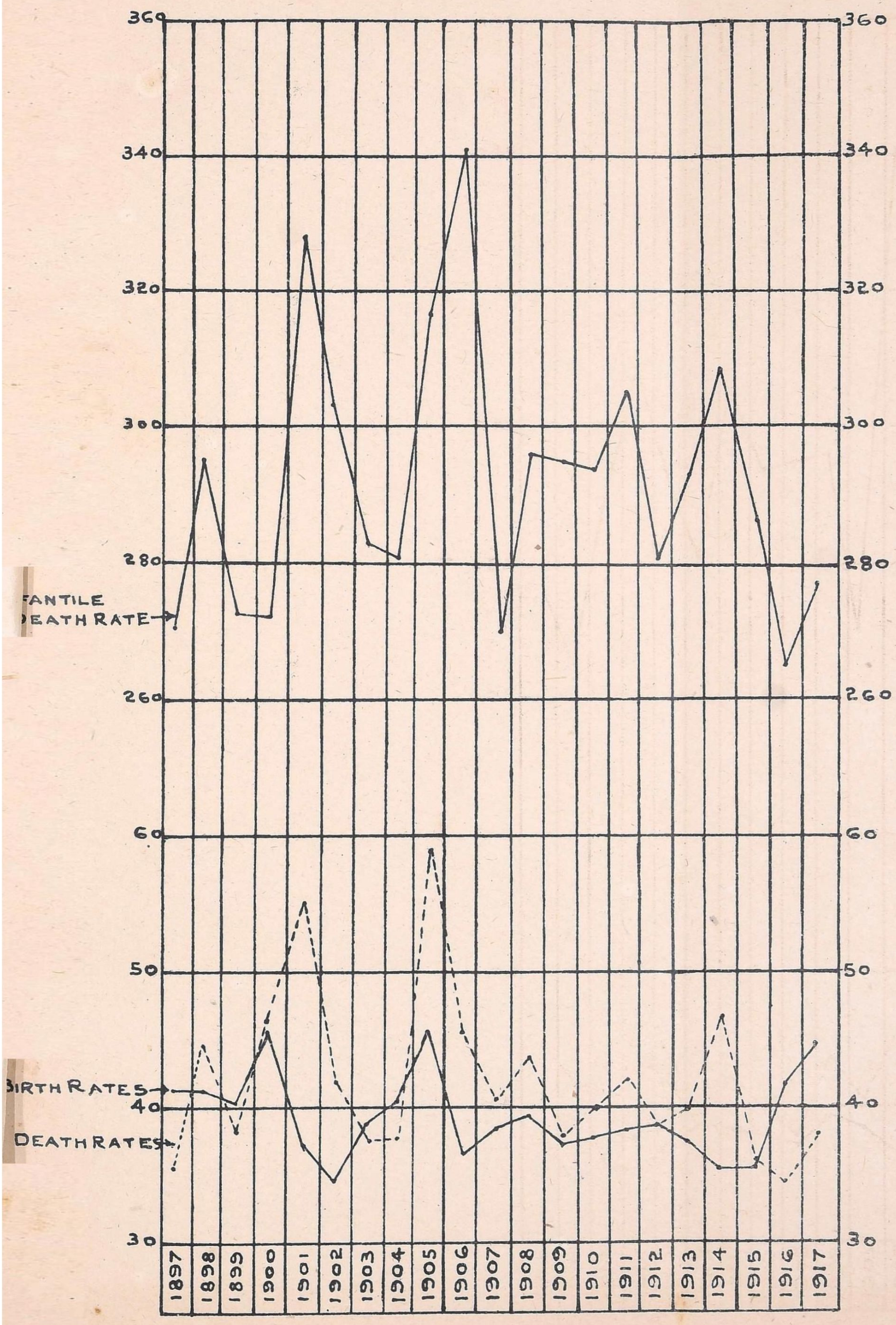
Name of Hospital.	Total number treated. In-door.	Total number treated. Out-door.	Average daily attendance. In-door.	Average daily attendance. Out-door.	Percentage of deaths to total in-door treated.	Income. From Subscription, etc. Rs.	A.	P.	From Government Rs.	A.	P.	From Municipality. Rs.	A.	P.
Royapettah Hospital ...	2903	54420	87·19	336·5	4·98	686	0	0	...	...	...	46,562	14	0
St. Thome Dispensary ...	...	11163	...	67 28	...	471	15	4	...	...	...	1100	0	0
St. Thomas Convent Dispensary	508	7701	8·88	123·35	2o/o	...	...	...	...	...	...	300	0	0
Victoria Hospital for Caste and Gosha Women ...	2593	14,519	93·80	120·54	...	38138	2	1	6440	0	0	2000	0	0
Rajah Sir Ramaswamy Mudaliar Maternity Hospital.	1957	3961	38·26	24·33	1·04	...	...	...	275	0	0	28,282	7	3
KalyaniHospital ...	800	7543	18	47·87	1·12	22210	3	10	15500	0	0	1000	0	0

Name of Hospital.	Expenditure. Establishment. Rs.	A.	P.	Diets. Rs.	A.	P.	European Medicines. Rs.	A.	P.	Bazaar Medicines. Rs.	A.	P.	Miscellaneous. Rs.	A.	P.	Repairs to Buildings etc. Rs.	A.	P.	Total. Rs.	A.	P.
Royapettah Hospital ...	8,032	14	4	10,714	0	9	7,977	14	10	2,389	9	6	17,279	11	0	824	11	0	47,248	14	0
St. Thome Dispensary ...	681	14	0	...	...	...	266	8	0	22	5	0	264	14	10	128	13	0	1,364	6	10
St. Thomas Convent Dispensary	1596	0	0	685	0	0	480	0	0	60	0	0	170	0	0	45	0	0	3,036	0	0
Victoria Hospital for Caste and Gosha Women ...	13470	3	5	12270	5	7	5,305	2	6	...	...	...	11,677	7	1	100	13	6	42,824	0	1
Rajah Sir Ramaswamy Mudaliar Maternity Hospital.	7,608	7	11	7,534	8	10	3,274	7	0	1,034	5	7	7,612	0	3	1,493	9	8	28,557	7	3
KalyaniHospital ...	12204	10	3	1043	14	8	2,606	4	7	...	...	...	1,797	1	6	21,058	4	10	38,710	3	10

Rd. per Registered post:
on 14·12·22·

P. IX. 66. 20

GRAPH SHOWING THE BIRTH DEATH & INFANTILE DEATH RATE FOR THE PAST 20 YEARS FROM 1897 TO 1916 AS COMPARED WITH THOSE OF 1917



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Vandyke., Survey Office, Madras.
1918

ILLUSTRATIONS

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KULASEKARAPATNAM-TISSIANVILLAI LIGHT RAILWAY (2′ 0″ gauge).

This line in the Tinnevelly district was originally constructed for the sole use of the East India Distilleries and Sugar Factories (Limited) of Madras. Its maintenance and use for public traffic were authorised in Madras Government Order No. 1134-L., dated the 19th June 1914.

Progress in opening—

Section of railway.	Date of opening.	Miles.	Total.
1	2	3	4
Kulasekarapatnam to Tissianvillai	18-7-15	18 00	18·00

Details of construction—

Permanent way.—The permanent-way consists of flat-footed steel rails 18 lbs. to the yard between the Factory and Kulasekarapatnam Port and 14 lbs. to the yard, between Kulasekarapatnam Port and Tissianvillai, laid on wooden and corrugated steel sleepers with clip and bolt.

Ballast.—The line is ballasted with sand.

Fencing.—The line is fenced with thorn hedges where it passes through private lands.

Curves.—The sharpest curve has a radius of 80 feet.

Gradients.—The ruling gradient is 1 in 80.

Local Government order—

Madras Government, Local and Municipal Department, order No. 1134-L., dated the 19th June 1914 authorising the East India Distilleries and Sugar Factories (Limited) of Madras to maintain and use for public traffic the tramway line laid by them between Kulasekarapatnam and Tissianvillai in the district of Tinnevelly.

Main provisions of Local Government order—

(i) *Land.*—Private lands taken on lease from the owners and Government land on an annual rental of Rs. 10 per mile.

(ii) *Government aid.*—Nil.

(iii) *Rates and fares.*—Not stipulated in the Government order. But the promoters have, for the present, fixed 3 pies per mile for passengers (one class only), 1 pie per maund per mile for goods in wagon loads, *i.e.*, 4 tons, 1½ pie per maund for goods in less than wagon loads, 1 pie per mile for every 5 seers, or fraction thereof, of parcels, and ½ pie per mile for every 5 seers, or fraction thereof in excess of 2 cubic feet, of luggage allowed free per passenger.

(iv) *Special obligations as to the conveyance of.*—
(*a*) Mails, troops, police, high Government Officials and Government stores— } *Nil.*
(*b*) Government bullion and coin and the persons in charge thereof— } *Nil.*

(v) *Power of the Government to determine contract.*—After 50 years from the date of the order, the local authority may purchase the line by paying to the promoters twenty-five times the average annual net earnings of the line for the last 5 completed years previous to the date of purchase subject to a minimum of 100 and a maximum of 125 per cent of the capital outlay.

The Government also may purchase the line for twenty-five times the average net earnings of the previous 3 years, subject to a minimum of 100 and a maximum of 120 per cent of the actual capital outlay, if, at any time, the line be connected with a railway and the proprietors fail to bring the line up to the standard required by the Indian Railways Act.

Statistics of working—

Year.	Mileage open at end of each year.	Total capital outlay including suspense, to end of each year, *i.e.*, outlay on (*i*) lines open and (*ii*) lines partly or wholly under construction.	Gross earnings.	Net earnings.	Percentage of net earnings on total capital outlay given in column (3).	Earnings per mile per week.	Proportion of expenses to earnings.
1	2	3	4	5	6	7	8
	Miles.	Rs.	Rs.	Rs.		Rs.	
1915-16 . .	18·00	2,86,260	17,630	5,141	2·02	19	70·64
1916-17 . .	18·00	2,98,045	79,893	47,150	15·82	85	40·98
1917-18 . .	18·00	3,46,325	32,043	—5,052	...	34	115·76

TARIKERE-NARASIMHARAJAPURA LIGHT RAILWAY (2′ 0″ gauge).

The construction of this line by the Mysore Durbar, under the provisions of the Mysore Tramways Regulation No. II of 1906, was sanctioned by the Government of India in the Foreign Department letter No. 3225-I.B., dated the 25th September 1913.

Progress in opening—

Sections of railway.	Date of opening.	Miles.	Total	Grand total.
1	2	3	4	5
Tarikere, on the Birur-Shimoga railway, to Lakvalli	15-1-15	11·88		
Lakvalli to Narasimharajapura	15-5-17	14·72	26·60	
UNDER CONSTRUCTION OR SANCTIONED FOR CONSTRUCTION				
Tadasa to Hebbe (sanctioned on 27th August 1917)	...	10·00	10·00	
GRAND TOTAL	...	...	...	36·60

Details of construction—

Permanent-way.—The permanent-way consists of 24-lb. flat-footed rails laid on wooden sleepers.

Ballast.—The line is packed with gravel ballast.

Fencing.—The line is unfenced throughout.

Curves.—The radius of the sharpest curve is 119 feet.

Gradients.—The ruling gradient is 1 in 50.

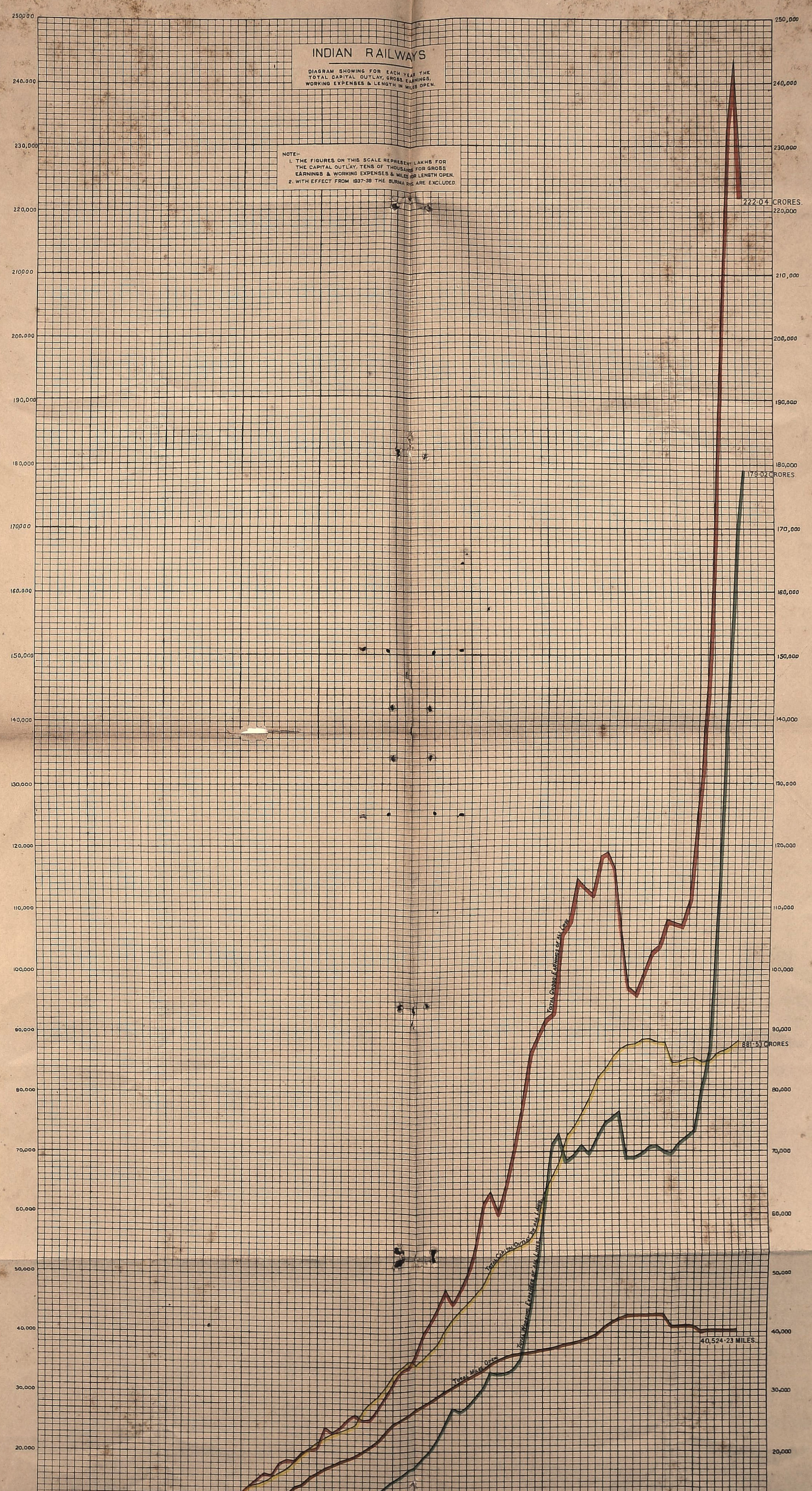
Agreement—

Nil. The line is owned and worked by the Mysore Government.

Statistics of working—

Year.	Mileage open at end of each year.	Total capital outlay, including suspense, to end of each year, *i. e.*, outlay on (*i*) lines open and (*ii*) lines partly or wholly under construction.	Gross earnings.	Net earnings.	Percentage of net earnings on total capital outlay given in column (3).	Earnings per mile per week.	Proportion of expenses to earnings.
1	2	3	4	5	6	7	8
	Miles.	Rs.	Rs.	Rs.		Rs.	
1914-15	12·00	2,50,673	Information not available.		...	...	...
1915-16	11·75	2,97,416	7,625	−2,109	...	12	127·66
1916-17	11·88	3,47,437	*925	−3,687	...	3	498·59
1917-18	26·60	5,14,281	17,798	−9,572	...	14	153·78

*The decrease is due to the closing of the line to traffic for a portion of the year.



REG. No. 2569 E'26-895'42-X'44-X'45-X'46-X'47-X'48.

PRINTED AT THE SURVEY OF INDIA OFFICES (P.L.O.)

Systemic Diseases	Abscess of the liver	...	21	...	...	31	...	...	6	58
Systemic Diseases	All other diseases of the liver	24	64	110	...	...	12	13	43	266
Systemic Diseases	Appendicitis	1	...	...	...	...	2	...	2	5
Systemic Diseases	All other diseases of the digestive system	8 52	3,441	1,395	4,239	2,283	450	847	666	14,173
Systemic Diseases	Inflammation and supperation of the lymph glands	28	...	...	...	47	102	27	30	234
Systemic Diseases	Goitre	...	3	...	...	...	...	...	...	3
Systemic Diseases	Brights disease	24	4	...	...	9	7	2	79	125
Systemic Diseases	All diseases of the urinary system ...	306	258	99	55	21	11	55	62	867
Systemic Diseases	Hydrocele	...	108	98	37	41	4	...	25	313
Systemic Diseases	Other diseases of the generative system ...	1,625	694	61	89	84	...	813	66	3,432
Systemic Diseases	Diseases of the organs of locomotion ...	21	31	47	...	85	...	9	...	193
Systemic Diseases	Diseases of the connective tissue ...	35	...	62	...	231	120	34	...	482
Systemic Diseases	Ulcers	803	1,426	2,693	1,237	853	254	89	88	7,443
Systemic Diseases	Other diseases of the skin	216	8,940	863	2,603	896	473	29	386	14,406
Systemic Diseases	All other local diseases	333	470	1,938	...	...	603	18	...	3,362
General and Local.	Injuries (General and Local)	205	22	2,336	...	437	844	3	...	3,847
General and Local.	Poisons: By Opium	...	...	...	...	...	...	...	...	...
General and Local.	Poisons: By other poisons	...	35	43	...	180	...	...	...	258
General and Local.	Labors: Normal	234	...	...	...	...	...	1,160	...	1,394
General and Local.	Labors: Abnormal	28	...	...	...	...	...	328	...	356
	Total ...	9,582	56,022	28,383	27,952	11,211	6,706	6,192	7,738	1,53,786
	Operations	358		49		543	360	190	...	

CORPORATION OF MADRAS.

ADMINISTRATION REPORT FOR 1921—22.

ADDENDA ET CORRIGENDA.

On page 2, para 1, line 36 for ' 5648 ' read ' 5596 '

" " " " " ' 4471 ' " ' 4419 '

" " " " " ' 10372 ' " ' 8183 '

" " " 38 " ' 68·43 ' " ' 68·38 '

" 16 " 14 " 15 " ' he ' " ' the '

" 19 " 21 " 18 " ' 5-3-7 ' " ' 5-2-4 '

" 24 " 39 " 20 " ' 6-14-11 ' " ' 6-13-2 '

" " " " " 21 " ' 6-10-0 ' " ' 6-11-6 '

" 30 " 49 " 15 " ' vi)' read '(vi)'

" " " " " 19 " ' servants ' read 'servants'. '

" " " " " 22 " ' Ramasavmy ' read ' Ramaswami. '

" 50 " 108 " 27 omit the word ' the ' before the word ' lady.'

" 68 Statement II in column 1 against 7 per cent. Electric Lighting Loan 1921 for ' 350000 ' read ' 305000.'

" 70 Statement of liabilities and assets in column 3 for ' 4,53,440-8-2 ' read ' 4,53,340-8-2.'

" 91 Statement II-A under the column ' Expenditure during the year ' for '6,43$_2$399,' read ' 6,43,399.'

" 93 " Under column " Remarks " against item 35 for ' f u ' read ' full.'

" 102 " III-A under columns 2 and 4 against item 12 for ' 5,078-13-6 ' read ' 5,978-13-6.'

" 132 Table 21 Under the column ' blue granite ' for ' 5258' read ' 15258.'

" 133 " 22 in the second column for ' 2 22 ' read ' 2·22.'

" 145 " 32 Under column " expenditure " for ' 843-15-7 ' read ' 1,843-15-7.'

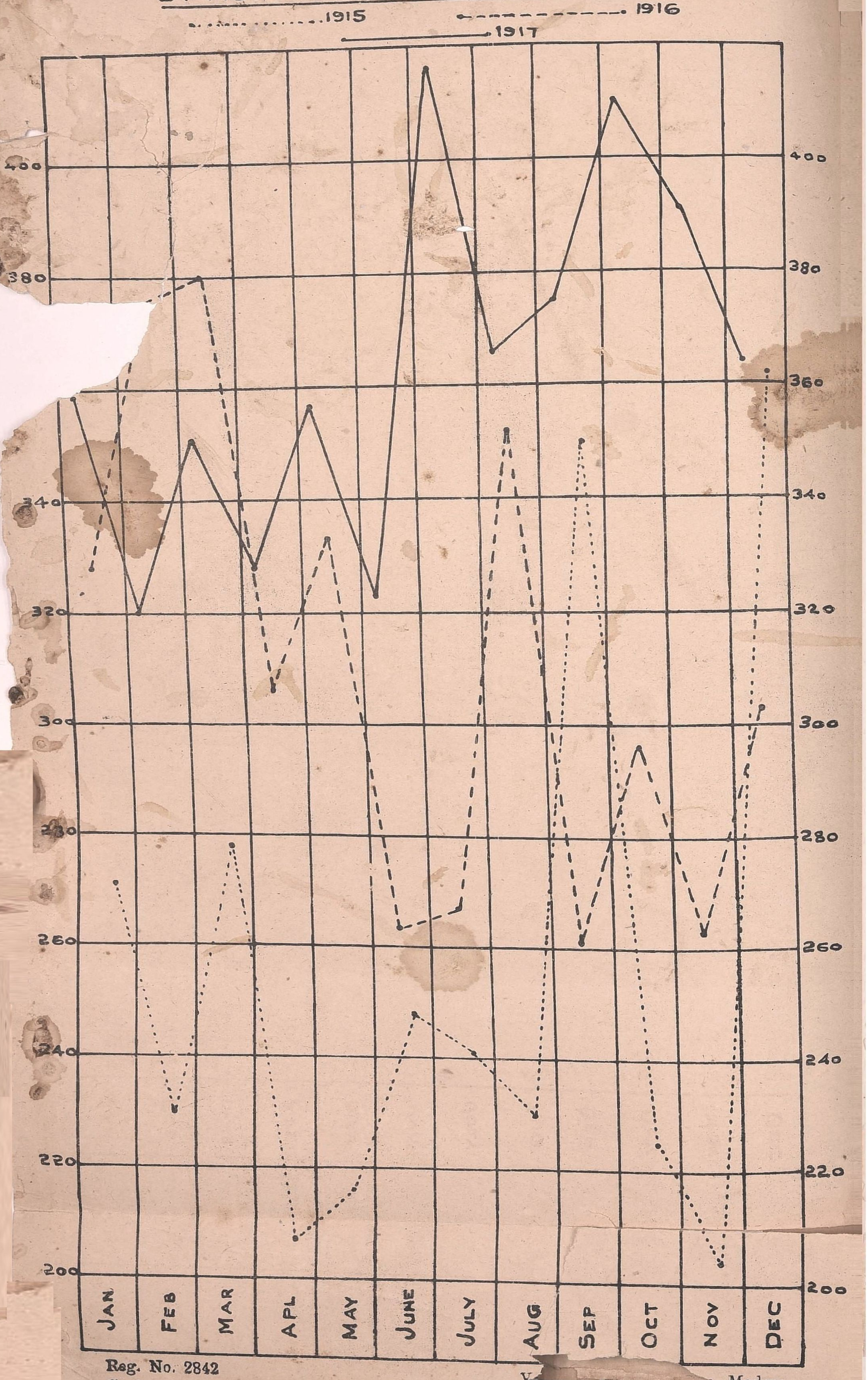
Corporation of Madras,
13*th* *October* 1922.

M. BAZLULLAH,
Commissioner.

S. Murthy & Co., Madras.

RAPH SHOWING THE TOTAL DEATHS FROM RESPIRATORY DISEAS

BY MONTHS DURING THE PAST 3 YEARS



Reg. No. 2842
Copies 350

V... Madras.

On going through a few copies of Volume II of the Railway Board's Report on Indian Railways for 1960-61, it has been noticed that certain drops in type have occurred in some of them as listed below. In case these occur in your copy the same may please be corrected.

ERRATA TO RAILWAY BOARD'S REPORT ON INDIAN RAILWAYS VOLUME II FOR 1960-61.

Page (s)	No. of Summary/ Statement/ Appendix	Particulars	Year	Col. No.	Particulars As shown	Particulars As should be
1.	2.	3.	4.	5.	6.	7.
2.	Sy. I	Item 11	1959-60	4	13.73	3.73
..	..	Item 8	1960-61	5	10.16	0.16
..	..		1959-60	4	10.07	0.07
..	..	Item 5	1960-61	9	10,68,34	10,68,64
3.	Sy. II	Item 2(b)	31st. Mar. 1961	9	45,62,7	45,62,70
..	..	Item 2(d)	..	..	-29,02,6	-29,02,26
..	..	Item 2(e)	..	..	-8,73	8,73
..	..	Item 3(f)	..	6	1,36,65	1,36,66
6	Sy. IV	Heading		-	1960-6	1960-61
11.	Sy. VII	Footnote, Difference (vide details below)		under kilometres	132.73	32.73
15.	Sy. VIII	Open wagons low sided-B.G.	1961	39	(38,856 (38,701	38,701 38,090
..	..	Total-M.G.	1960	..	77,752	47,752
25.	Sy. X	Revenue earning traffic tonnes/ tons carried.	1959-60	26	112,016*	112,015*
..	..	Net tonne kilometres/ton miles (in thousands)	..	..	44,270,663*	42,270,663*
..	..	Non-revenue traffic-average kilometres/miles/tonne/ton of goods was carried.	..	27	224.5	224.6
26.	Sy. XI	Net earnings per mean kilometre worked (Govt. Railways)	1960-61	5	17,292	17,291
..	..	Net earnings per mean mile worked (Govt. Railways)	..	..	27,829	27,827
..	..	Net earnings per mean mile worked (B.G.)	..	..	60,221	63,221
..	..	Net earnings per mean kilometre worked (M.G.)	..	..	-2,295	-2,299
..	..	Net earnings per mean mile worked (M.G.)	..	..	-3,693	-3,700
34.	Sy. XIII	Item 14.03 - Diesel Fuel - M.G.	..	3	3,157	3,115
..	..	Item 14.05 Kerosene & other fuel oils (Cu.m.) - M.G.	..	4	1	0.4
40	Statement 2(a)	Item I(i)2.	1961	7	-3,97,70	-3,08,19
..	..	Item I(i)9	..	..	6,05,60	6,05,69
..	..	Item I (ii)10	..	1	Northern Frontier (Strategic)	Northeast Frontier (Strategic)
50.	Statement 4	Heading	--	10	Appropriation to Depreciation	Appropriation Depreciation

1.	2.	3.	4.	5.	6.	7.
112.	Statement 12	Average for B.G. Non-suburban	1960-61	64(a)	60.7	760.7
''	'' ''	Western Rly. Non-suburban	1959-60	67(a)	00.7	100.7
''	'' ''		1960-61	''	186.1	86.1
116.	'' ''	South Eastern Rly. Non-suburban	1959-60	76	57,38/	57.68/
120.	'' ''	Average for M.G. - Sub-urban	1959-60	87(a)	5.56	3.56
122.	'' ''	Average for Govt. Railways -Non--Suburban	1960-61	85(b)	17.3	17.2
145.	'' 13	Central B.G.	1959-60	112	1,118	1,188
163.	'' ''	Northeast Frontier M.G.	''	193	5,960	6,960
''	'' ''		''	''	5,849	6,849
176.	'' ''	S.E. B.G.	1960-61	242	86,511	865,161
178.	'' ''	Central M.G.	''	255	80	180
183.	'' ''	Western M.G.	1959-60	277	200	209
189.	'' ''	Northern M.G.	''	332	11.8	11.6
192.	'' ''	Southern B.G.	''	346	4.80	4.30
201.	'' 15	Average for M.G.	''	32	5.017	5.01
''	'' ''		''	33	0.24	-0.24
''	'' ''	''	1960-61	''	0.17	-0.17
203.	'' 16	South Eastern B.G. Diesel Elect.	1959-60	9-TM	4,061,362	4,061,361
207	'' ''	Western - N.G.	''	''	14,391	114,391
209.	'' 17	Western Rly. - B.G. All traction.	1960-61	4	10,49	10,498
''	'' ''	Western - B.G. Diesel - Elect.	1959-60	15		2
''	'' ''	Total B.G. - steam	1960-61	9	1,05	1,056
''	'' ''	Total B.G. Diesel	''	6	(3,1	3,116
					(1,3	1,936
''	'' ''	Total B.G. - All traction	1959-60	15	563	9,563
''	'' ''	''	1960-61	13	140,88	140,886
''	'' ''	Northeast Frontier M.G.		15	(2,54	2,554
					(1,57	1,587
''	'' ''		''	16	(2,62	2,612
					(1,63	1,623
215.	'' ''	Central M.G.	''	37	10	109
217.	'' ''	Southern M.G. All Traction	1959-60	38	4,922	14,922
219.	'' ''	Southern - N.G.	1959-60	38	35	335
222.	'' 18	Central - Steam	1960-61	3	12,6	612,6
''	'' ''	Western - All Traction	''	7	14,4	514,4
223.	'' ''	Total - B.G. (Steam)	1959-60	12	1,129,9	1,129,8
''	'' ''	SoutheEastern - Steam	1960-61	20	728,7	3,728,7
''	'' ''	Eastern - Steam	''	15	1,05,0	1,075,0
226.	'' 19	Northern - Diesel	''	4	176	476
236.	'' ''	Southern	1959-60	20	65,588	66,588
''	'' ''	''	''	''	41,370	41,376
244.	'' ''	Total - N.G. - Steam	''	24	13,31	13,315
245.		Total Govt, Rlys. - Steam	1960-61	28-30	216,255	216,245
246.	'' 20	Average for B.G. - Steam	1959-60	3	9.3	19.3
''	'' ''		''	''	.0	12.0
''	'' ''	Western All Traction	''	13	.7	14.7
''	'' ''	Central - Steam	1960-61	14	17.9	17.6
''	'' ''	Central - Diesel	''	''	7.49	7.46
''	'' ''	Eastern - Electric	''		12.7	12.6
''	'' ''	Southern	''		18.8	13.3

1.	2.	3.	4.	5.	6.	7.
53.	Statement 22	Western - Diesel Electric	1960-61	20	88	86
257.	'' ''	Total - N.G. - Steam	1959-60	19	(130/	130≠
265.	'' 24	Northeast Frontier M.G.	1959-60	10	(81/ ,817	817 9,817
''	'' ''	''	1960-61	6	2	2,086
266.	'' 25	Southern - M.G.	1959-60	7	(2,076,026 (2,042,133	2,078,804 2,045,972
294	'' 27(b)	Total Govt. Railways - Kerosene - Gal.	1959-60	5	426,318	426,311
306.	'' ''	Total Govt. Railways - Diesel	''	19	4.03	3.90
319.	'' 28	Footnote §	-	-	§ Northern pool (Northern, North Eastern and Western Railways)	§ Northern pool (Northern, North Eastern, Northeast Frontier and Western Railways)
324.	'' 29	Decrease, Tonnes	-	33	6	6,5
336.	'' ''	Item 3(c) Metallic ores - Total carried increase - tonnes	-	124	48	48,6
352	'' ''	Item 6(b) - Iron & Steel Division-(B) Tonnes - Total Govt. Railways.	1960-61	247	5,932,5	5,959,5
71.	'' 30	Central (B.G.) - Rs. per Km.	''	40	4,471.76	4,571.76
''	'' ''	Eastern - B.G. - Rs. per mile	''	46	8,531.70	8,501.70
''	'' ''	Central (M.G.) - Rs. per Km.	''	40	6,636.07	3,636.07
''	'' ''	Norhheast Frontier (M.G.)	''	42	51,61,381	59,61,381
''	'' ''	Western - M.G. - Rs. per mile	''	40	670.12	5,706.12
''	'' ''	Northern - N.G.	''	45	8,9,758	8,49,758
73.	'' ''	Southern - N.G.	''	62	Southern/	Southern
''	'' ''	South Eastern - N.G.	''	''	South Eastern/	South Eastern
78.	'' ''	Western (M.G.) - nP. per Km.	''	99	57.17	55.17
87.	'' ''	Per engine kilometre/mile	''	159	-	Km.
32.	'' 32	Item 3.02 Track kilometrage/mileage, (excluding sidings)	1960	6	58.89	58.39
33.	'' ''	Item 10.03 Trailer coaches	1959-60	6	-	6
35.	'' ''	Item 20.02 Motor coach kilometre/miles per motor coach failure. (in units)	''	5	110,524	101,524
37.	'' ''	Item 25.04 - Cost per train kilometre/mile	''	5	3.61	3.61¶
39.	'' 33	Central Railway - N.G.	''	4	1*	1
69.	'' 39	Item S - Receptacles and scrap.	-	30	77,72	77,22
86.	'' 40-II	Railway Board and other Railway offices.	1960-61	3	::	1
88.	'' ''	''	''	4(a)	1,1001	1,001
04	'' 40-VII	Dandakaranya Bolangir Kiriburu Railway Project.	''	1	Kiribeuru	Kiriburu
09.	'' 41(ii)	Above column 25	1959-60	25	Mutilated	1959-60
''	'' ''	Above column 27	''	27	-do-	-do-
30.	'' 42	Northern M.G.	-	10	0.01	0.001

Nayyar*

CHAPTER I

GENERAL

1. General Review of Working.—The year under review was the first complete working year after the end of the war. As compared with the preceding year there was a marked decline in military traffic, both in Coaching and Goods. The loss on military passenger traffic was, however, made up by the increase in civilian passengers, but the quantum of goods traffic, showed a very considerable decline. There was also a decline in coaching earnings other than passenger earnings, chiefly due to decline in military parcels traffic. While the earnings from passengers on all Indian Railways increased by a little over 3 per cent., the earnings from goods traffic recorded a decrease of 10·6 per cent. The gross traffic receipts of Indian Government Railways declined from 225·74 crores in 1945-46 to 203·35 crores in the year under review.

Some of the significant statistics relating to the traffic in 1946-47 for all Indian Railways are given below along with the corresponding figures for 1945-46 :—

Items.		1945-46.	1946-47.	Percentage variations.
Number of passengers carried (millions)		1,044·3	1,139·0	+9·1
Passenger miles (millions)		41,336	42,060	+1·8
Earnings from passengers (crores)	Rs.	86·74	89·54	+3·2
Average amount earned per passenger per mile	Pies.	4·03	4·09	+1·5
Average miles a passenger was carried	Miles.	39·6	36·9	—6·8
Freight tons carried (millions)		100·6	91·5	—9·0
Net ton miles (millions)		29,166	26,981	—7·5
Earnings from goods carried (crores)	Rs.	116·32	104·04	—10·6
Average amount earned per ton per mile	Pies.	7·65	7·40	—3·3
Average mile a ton of goods was carried	Miles	290	295	+1·7

See Appx. A—Graphs—Nos. (ii)—(vi).

It will be seen from the above statement that the number of passengers carried increased by over 9 per cent., while total freight tons carried declined by a similar percentage. With less demand for transport for military purposes, it was possible to restore a number of passenger services during the year. It will, however, be noticed that while the number of passengers carried increased by 9 per cent., the increase in passenger miles was in a much smaller ratio. The decline in the average distance travelled per passenger explains the increase in the average earnings per mile per passenger, since, with greater short distance traffic, the depressing effect of telescopic scales on the average is less pronounced.

A comparison of the passenger miles in 1938-39 with those in 1946-47 shows the extent to which passenger traffic has grown since the war. Excluding traffic moved by military specials, passenger miles in 1946-47 totalled over 42 millions as against only 18·7 millions in 1938-39—an increase of 124 per cent. As compared with 1945-46, the increase in passenger miles in 1946-47 was 1·8 per cent. The period since 1938-39 has also seen significant changes in the distribution of passenger traffic between upper classes and the third class. In 1938-39, third class passengers formed 97 per cent. of the total number of passengers and third class passenger miles formed 94·8 per cent. of the total passenger miles. By 1945-46 the percentage of third class passengers had fallen to 93·4, rising slightly in 1946-47 to

93·7. Third class passenger miles showed a corresponding variation from 94·8 per cent. in 1938-39 to 88·8 in 1945-46, to rise slightly to 89·5 in 1946-47. It will be noticed from these figures that upper class travel has doubled itself during the period from 1938-39 to 1946-47.

The volume of goods traffic during the year, measured in terms of net ton miles, showed a decline of 7½ per cent. over the preceding year. Compared with 1938-39, however, there was an increase of over 22 per cent. There was an appreciable decline in the volume of military traffic handled, while other traffic continued to be subject to priority regulations. An analysis of the movements during the year shows that coal accounted for 42·8 per cent. of the total net ton miles and foodgrains, pulses and oilseeds together for 12·1 per cent. as compared with 38·5 per cent. and 11·3 per cent. in 1945-46. " Other commodities " accounted for 45·2 per cent. of the traffic as compared with 50·3 per cent. in the preceding year. The proportion of low-rated to more highly-rated traffic was, therefore, higher in 1946-47; this is reflected in the decline in the average amount earned per ton per mile from 7·65 pies in 1945-46 to 7·40 pies in 1946-47.

The Railways had to work under serious difficulties during the year under review. The severe strain during the war years had told on the rolling stock, the maintenance and repairs of which were greatly hampered for want of spare parts. The percentage of engines under or awaiting repairs in Mechanical and Transportation workshops went up from 16·4 per cent. on the broad gauge and 15·8 per cent. on the metre gauge in 1945-46 to 18·4 per cent. and 19·8 per cent. respectively in 1946-47. The percentage of wagons under or awaiting repairs on the broad gauge increased from 5·26 to 6·99 and on the metre gauge from 4·36 to 7·57.

Punctuality of passenger trains suffered badly due mainly to a crop of engine failures. Over-worked locomotives badly in need of replacement coupled with the inferior quality of coal supplied to railways were mainly responsible for this deterioration. Railway working was also adversely affected by civil disturbances which broke out in Calcutta area in August 1946 and gradually spread to other parts of the country. Labour unrest in various industries and notably in the Calcutta Docks also seriously affected railway operation.

The year under review saw the introduction of the first practical measure towards simplification of the rating structure on Indian Railways. In accordance with the recommendations of the Post-war Rating Committee, a telescopic class rate on a continuous mileage basis was introduced from 1st February 1947 as an experimental measure for a small number of commodities. The articles included were manures, oil-cakes and bone meal for manure. On the Commercial side, the only other event of importance was the increase in passenger fares of 6¼ per cent. over the prevailing rates, made effective from 1st March 1947.

2. Railways and the Legislature.—The Railway Budget for 1947-48, as approved by the Standing Finance Committee for Railways, was presented to both the Houses of the Legislature on the 17th February 1947. The general discussion on the budget proposals took place in the Legislative Assembly on the 20th February 1947, and in the Council of State on the 21st February 1947. The vote of the Assembly on the demands for grants was taken on the 22nd, the 24th, the 25th and the 26th February 1947.

The discussions covered various subjects, the most important of which was the proposed increase in rates and fares with special reference to its bearing on the general financial position of railways. The adequacy and necessity of the Railway Reserve Fund and the Betterment Fund and the Railways' contribution to General Revenues came under discussion in this connection. Other subjects discussed were the provision of more amenities for the travelling public, especially third class passengers, rail-road co-ordination, labour conditions, and financial control and economy in the administration and maintenance of railways.

There were seventeen motions for token cuts. Of these, three were not moved. One motion to discuss "the failure of the Railway Board to implement the interim settlement with the All-India Railwaymen's Federation" was negatived. Discussions on two motions "the policy of rail-road co-ordination" and "the need for greater utilisation of electricity for running railways" were not concluded. Motions on the following subjects, *viz.*, "the revision of rates and freights structure", "the necessity of re-organisation of the railway administrations, including Indianisation of the Railway Board", "economy in railway administration and maintenance", "the opening of new lines and restoration of dismantled lines", "the manufacture of locomotives, wagons and coaches", "amenities for passengers", "the shortage of wagons", "the disbursement of salary through private agency on payment of commission", "the capacity of Indian Railways to meet transport needs of the country", "the depreciation fund in relation to the whole question of railway reserves and the Railway Separation Convention" and "increase of Railway fares below rupee one" were withdrawn after discussion. On the last-mentioned cut motion, however, Government decided that the increase of $6\frac{1}{4}$ per cent. in passenger fares would not be made applicable to fares below eight annas, including those for season tickets between points where the single journey fare is below eight annas.

Out of a total number of 3,034 questions asked in both the Houses during the year, 382 or 13 per cent. related to the Ministry of Railways.

3. Standing Finance Committee for Railways.—The Committee met 19 times during the year. As usual, it scrutinised proposals for Capital and Revenue Expenditure to be incurred in the year 1946-47 prior to their being placed before the Legislative Assembly. Among other important proposals approved by the Committee were the creation of certain permanent posts for Public Relations and Publicity Organizations on the Indian Government Railways and in the office of the Railway Board, the purchase of the Khulna-Bagerhat and Mymensingh-Bhairab Bazar Railways, the detailed rules of the Railway Betterment Fund and the draft rules regulating the procedure of the Standing Finance Committee for Railways.

Other important subjects discussed by the Committee were the effects on the Railway finances of the demands of the Railwaymen's Federation, the Lower Gazetted Service, the current position and further prospects in regard to the construction of a locomotive manufacturing plant at Kanchrapara and the working of the Cash and Pay Department on Contract system.

4. Central Advisory Council for Railways and Local Advisory Committees.—Two meetings of the Central Advisory Council for Railways were held during the year and among the important subjects discussed by the Council were, the establishment of Railway Service Commissions for the recruitment of subordinate staff, design of post-war third class coaches, management of railway collieries, further acquisition of collieries to render railway administrations self-sufficient in regard to their coal requirements, acceleration of the Grand Trunk Express, the general policy in regard to catering on railways, policy regarding contracts for the sale of books, periodicals, etc., on railways and liability of railways in respect of compensation claims.

Local Advisory Committees held in all 75 meetings during the year, at which members were kept fully informed on various important problems confronting the railways. Many valuable recommendations made by members were accepted. A number of subjects were discussed at the meetings, among which may be mentioned amenities for third class passengers, restoration of train services, ticketless travel, punctuality of trains and improvement in train services, reservation of accommodation, lighting in trains and at stations removal of restrictions on the booking of goods, over-crowding in trains, safety of passengers, prevention of losses in transit and thefts of fittings from passenger compartments.

5. Amenities for the public.—The improvements in this respect, which it was possible to carry out during the year, are mentioned in detail in Chapter VIII. A number of passenger services were restored during the year, but expansion in this direction was limited by the availability of coaching stock. Additional accommodation for third class passengers on fast through trains was provided on some railways as an experimental measure. No large scale programme for provision of amenities could be carried out during the year in view of the acute shortage of essential materials, difficulties of labour and the pre-occupation of railways with immediate post-war problems. A number of booking offices and out-agencies were, however, opened on various railways and additional booking facilities provided at some important stations by the opening of new booking windows. Other improvements were additional waiting rooms and halls, extensions and improvements to platforms and provision of additional platforms and sheds. Cleanliness to coaching stock continued to receive special attention. On some railways improvements were also made to lavatories of third class coaches. The appointment of Women Inspectresses on some railways to help and guide women passengers also deserves mention.

6. Staff.—In the field of relations with the staff, the year witnessed several important events which are dealt with in detail elsewhere in this Report. Apprehensions were entertained by railwaymen that, with the shrinkage of traffic to normal levels after the war, there would be large scale retrenchment of staff. It was contended that the existing hours of work for several classes of railway employees were far too long, that the leave reserves were inadequate, that leave rules and holiday concessions required liberalisation and that if necessary reforms in this regard were introduced, there would hardly be a case for retrenchment. In response to the demands of the All-India Railwaymen's Federation, Government appointed, in April 1946, an Adjudicator to adjudicate on questions relating to hours of work, compulsory periodic rest, leave reserve, leave rules and holiday concessions of staff not governed by the Factories Act, 1934. The adjudication proceedings had not concluded when the year ended. The second important event was the appointment, in May 1946, of the Central Pay Commission to enquire into the conditions of service of all Central Government servants, with particular reference to the adequacy of their pay scales and standards of remuneration. The Commission had not completed their labours at the close of the year under review. The third event of importance was the notice of a general strike on railways served by the All-India Railwaymen's Federation, to be operative from 27th June 1946, in the event their demands in respect of pay and other concessions were not conceded. Following negotiations between the Railway Board and the Federation, the notice of strike was called off, Government agreeing to the grant of an interim relief of Rs. 4-8 per month to all railway employees drawing Rs. 250 per month and below pending the recommendations of the Central Pay Commission, and giving an undertaking that no railway servant who was in service on 15th September 1945 would be discharged on becoming surplus, unless he refused alternative employment, till the report of the Adjudicator was received and considered. The agreement with the Federation, however, did not prevent a general strike on the South Indian Railway. The trouble started on that Railway on 23rd July 1946 when a large number of workshop staff staged a lightning stay-in strike. On the 1st August 1946, the South Indian Railway Labour Union served on the Administration, notice of a general strike accompanied by a list of demands, many of which were covered by the terms of reference to the Adjudicator and the Central Pay Commission. This was followed by a notice of strike by the South Indian Railway Station Masters' Association served on the Administration on the 11th August 1946. Attempts to arrive at a settlement having proved unsuccessful, the general strike commenced on the night of the 24th August 1946 and continued till the evening of the 22nd September 1946, when it was called off. The position returned to normal on the 26th September 1946.

The total number of staff of all grades employed on open line of Indian Government Railways rose from 921,057 at the end of 1945-46 to 974,856

at the end of the year under review, while the number of construction staff decreased from 7,138 to 5,773. The total cost of staff was Rs. 67,74,51,982, an increase of Rs. 5,88,35,739 over the preceding year. The increase in cost was due mainly to payment of arrears of dearness allowance for the period 1st July to 31st December 1944, owing to enhancement of rates with retrospective effect, and the payment of interim relief pending the recommendations of the Pay Commission. The cost of concessional supply of foodgrains, etc., through railway grainshops rose from Rs. 30 crores in 1945-46 to 37·3 crores in 1946-47. The average relief per ration card holder per month rose from Rs. 13·7 in 1945-46 to Rs. 16·6 in 1946-47.

During the year under review, staff numbering 17,039 rendered surplus on Indian Government Railways were re-absorbed in employment, while 1,898 men were discharged, of which only 36 were recruited earlier than 15th September 1945.

7. Security Measures on Railways.—Although protection of railway property forms part of the maintenance of law and order the responsibility for which normally rests with Provincial Governments, the Railway Board were compelled during the War, to adopt special measures for the protection of railway property, to ensure safety of communications. It was at that time possible for some Railways on which the Defence of India Scheme was in operation, to raise, with the concurrence of the War Department, armed Railway Protection Units for this purpose as the personnel could be enrolled under the Indian Army Act in the Defence of India Corps (Railways). On others, the Provincial Governments provided the necessary armed police guards at the cost of the railway. The Defence of India Corps was disbanded in December 1945, but as acts of lawlessness continued to be committed in Bengal, and it was apprehended that the Provincial Government would not be able to render sufficient assistance to the Railways concerned, *viz.*, the Bengal Assam, East Indian, and Bengal Nagpur Railways, the Railway Board, at the urgent request of the General Managers of these Railways, sanctioned in March 1946 the raising, at the expense of railway revenues, of an additional force armed with lathis only, arming with fire arms not being legally permissible without the enactment of special legislation.

The repercussion of the disturbances of August 1946 in Calcutta and elsewhere in Bengal, Bihar and the United Provinces were felt by the inhabitants of railway colonies, and passengers on railways. A number of cases of robbery and murder on running trains, looting, etc., of goods trains and goods sheds and of sabotage were reported. To allay the feeling of uneasiness engendered by these occurrences, special arrangements had to be made with the Governments of Bengal, Bihar and the United Provinces, the three Provinces mainly affected, for the raising of additional armed police solely for the protection of railway property, railway staff and railway passengers travelling by public trains, at the cost of railway revenues. These arrangements were intended to be temporary and for a period of six months only, but later had to be extended. By 31st March 1947 approximately 3,000 persons of all ranks were recruited for this force on the Bengal Assam, Bengal Nagpur, East Indian, and Oudh Tirhut Railways in Bengal, Bihar and the United Provinces.

Another measure adopted to serve as a deterrent to offenders was the promulgation of the Railways (Emergency Provisions) Ordinance, 1946, enhancing the penalties for offences under Sections 108 and 126 to 129 of the Indian Railways Act, 1890, and making provision for imposing punishments on likely saboteurs.

As a further measure towards security of passengers in running trains, railways introduced additional measures to ensure the highest possible standard of maintenance of security fastenings in compartments, especially those fitted in women's compartments. Arrangements were also made to fit iron bars to windows of lavatories of all compartments as carriages passed through shops for periodical overhaul.

8. Public relations and Publicity.—Joint Public Relations and Publicity Organisations under Public Relations and Publicity Officers in the junior administrative rank have been formed for the Bombay and Calcutta groups of Railways. A similar joint organisation is intended to be set up for the South Indian Railway Group. It is now a usual feature for the Press to contact the Public Relations Officers concerning matters of public interest and by this means a welcome opportunity is afforded to railways to be in intimate touch with public opinion.

9. Complaints Organisation.—In pursuance of the decision of Government to establish some special machinery for the speedy disposal of complaints, an organisation known as " Complaints Section " was set up in the offices of the Railway Board and the headquarters of all Indian Railways. The primary function of this organisation is to see that all complaints received are given prompt and adequate attention.

During the period 14th October to 31st March 1947, about 600 complaints were received and dealt with by the Complaints Section in the Railway Board's office and over 6,000 complaints by the Complaints Sections of Indian Government Railways. The indications are that the organisation has generally been well received by the public.

10. Damage caused to Railways by floods and cyclones.—On the Jodhpur Railway, on account of heavy rains temporary diversions of railway track laid in the beds of the Sukri, Sagi and Khara Rivers on the Samdari-Raniwara Branch were washed away from time to time, resulting in interruption to traffic for periods varying from 3 days to 21 days. The cost of repairing the diversions amounted to Rs. 10,000.

On the Madras and Southern Mahratta Railway, due to unprecedented rains and subsequent floods, the track was breached at about 15 places on the North West Line, between Pudi and Urampadu. Seven bridges were affected, two of them being washed away. Communication was interrupted from 6th December 1946 to 22nd December 1946. The total cost of repairs was approximately Rs. 2,35,000.

On the Bengal Nagpur Railway, after a continued spell of heavy rains between August and September 1946, very serious land slides and rock-slips occurred between Paradol and Chirimiri on Anuppur-Chirimiri Branch and between Bissam-Cuttack and Theruvali on Raipur-Vizianagaram Branch. Embankments also slipped at several places between Howrah and Khargpur. The cost of repairs amounted to Rs. 2,46,000, approximately.

On the South Indian Railway, as a result of heavy and continuous rains, serious breaches occurred at several places on the Erode-Jalarpet Section on the broad gauge, and Trichinopoly-Dhanushkodi Main Line, Trichinopoly-Villupuram Chord, Madura-Manamadurai Branch and Salem-Vridhachalam Branch on the metre gauge, interrupting through communication for periods varying between two and six days. The approximate cost of restoration amounted to Rs. 1,33,000.

On the Bombay, Baroda and Central India Railway, due to heavy rains, breaches occurred on the Surat-Navasari, Anand-Godhra and Ratlam-Chitorgarh Branches. New filling in the approaches of newly-built culverts between Kim and Kosamba on Surat-Broach Section also sank. Through communication was interrupted for periods varying between one and eight days. The approximate cost of restoration amounted to approximately Rs. 1,48,000.

On the East Indian Railway, in the month of July 1947, abnormal rain caused breaches on the Lhaksar-Dehra Dun Branch in Moradabad Division, causing interruption to traffic for 13 to 20 hours. There was serious scour to embankments at Jharna Reservoir and the line was also blocked following land slips between Gujhandi and Gurpa in the Ghat Section in the Asansol

Division. Communication was interrupted for 3 days. The estimated cost of making good the damage amounted to Rs. 1,17,000, approximately.

On the Oudh Tirhut Railway, due to high floods in the Bolan and Kamla rivers, breaches occurred on the Nirmali-Ghoghardiha and Khajauli-Jaynagar sections, interrupting through communication for 9 and 18 days. The cost of repairing was Rs. 5,000.

On the North Western Railway, a breach occurred due to floods in the river Sutlej on the Raiwind-Ferozepore Cantonment Section. Communications were interrupted for about 8 days. The approximate cost of repairs was Rs. 7,000.

11. Acquisition of Company Railways by Government.—According to the Government's decision mentioned in the last year's report the Sara-Serajganj Railway and the Ahmedabad-Prantej Railway were purchased on the 1st October 1946 and the 1st January 1947 respectively. The contract of the Mandra-Bhaun Railway was terminated with effect from the 31st March 1947 and the railway acquired by the Government on 1st April 1947. During the current year, Government decided to buy the following branch lines :—

(1) Khulna-Bagerhat Railway with effect from the 1st April 1948. It is a rebate-aided narrow gauge line 19·75 miles in length, owned by the Khulna-Bagerhat Railway Company Limited, and worked by the Bengal Assam Railway.

(2) Mymensingh-Bhairab Bazar Railway with effect from the 1st April 1948. It is a metre gauge line 100·38 miles in length, owned by the Mymensingh-Bhairab Bazar Railway Company Limited, which is partly rebate-aided and partly guaranteed and is worked by the Bengal Assam Railway.

NOTE.—Sara-Serajganj Railway, Mandra-Bhaun Railway, Khulna-Bagerhat Railway and Mymensingh-Bhairab Bazar Railway now lie in the Dominion of Pakistan.

12. Taking over of Vizagapatam Port.—The administrative control of the Vizagapatam Port was transferred from the late War Transport Department to the Railway Department with effect from 1st April 1946 and the General Manager, Bengal Nagpur Railway was appointed Conservator, Vizagapatam Port.

13. Post-war Planning.—The post-war plans of Railways were detailed in the last year's Report. The further developments that took place during the year under review are as follows :—

(i) *Amenities for Railway Staff—Provision of staff quarters.*—The Housing Committee which was appointed in October 1945 submitted their report in April 1946. The Committee reported on (i) the accommodation and amenities to be provided in the quarters designed for the various classes of railway employees, (ii) the classes of staff to be housed, (iii) the basis on which rent should be assessed and the financial return to be expected after consideration of all factors and (iv) the improvements in the existing quarters reported to be below the standard prescribed for new quarters in respect of accommodation, light, sanitation, etc. The main feature of the report was that six designs of quarters for various categories of staff according to their pay and status were recommended indicating the costs which would be involved. The standard of accommodation shown in these designs was according to the modern conception of housing and much better than that in the existing staff quarters. The Committee's recommendations are still under the Board's consideration, but the standard of accommodation recommended by the Committee has been accepted in principle with certain adjustments with a view to reduce construction costs.

(ii) *Electrification of Railways.*—(*a*) The report on the investigation carried out by the Bombay, Baroda and Central India Railway on the Virar-Sabarmati Section has been referred to Messrs. Merz & McLellan, Consulting Electrical Engineers to the Government of India for further detailed investigation and report.

(*b*) The need for the reorganisation of railway facilities in and around the city of Calcutta involving electrification of certain sections has been felt for a long time and a Committee known as "The Calcutta Terminal Facilities Committee, 1947" was set up with Sir Padamji Ginwala as Chairman and four members to investigate this urgent and complex problem. The terms of reference are as follows:—

(1) "To consider and report upon the adequacy of the present rail terminal facilities in Calcutta both for coaching and goods traffic;

(2) To make recommendations for the provision of such additional or alternative facilities as may be necessary adequately to handle the traffic now offering and likely to offer during the foreseeable future. In making these recommendations the Committee should assume that suburban passenger services in the Calcutta area, and the East Indian Railway main line at least as far as Dhanbad, will be electrified as soon as possible. The Committee are requested to recommend the geographical limits to which they think "suburban passenger services" should extend;

(3) To recommend what additional rail construction, if any, should be undertaken in the urban area either as a part of the recommendations under (2) above, or independently of them;

(4) To give approximate estimates of cost of the various schemes which the Committee recommend;

(5) To give their views on the division of cost between the Railways and any other authorities concerned of such schemes as may be recommended".

(iii) *Construction of new lines and replacement of lines dismantled during the war.*—Construction of the Rupar-Talaura Branch of the North Western Railway to serve the Bhakra Dam Project which is being constructed by the Punjab Government was sanctioned during the year and is in progress.

The restoration of the Bhimsen-Khairada Branch of the Great Indian Peninsula Railway, which was dismantled during the war was also sanctioned and is in progress.

Besides this, surveys of various other projects were also sanctioned during the year and reports on some of them were received and were under consideration of the Board.

14. Railway Rates Advisory Committee.—Dr. Khwaja Sir Mohamed Noor, C.B.E., continued as President and the post of Railway Member remained unfilled during the year. No cases were referred to the Committee during the year.

CHAPTER II

FINANCIAL RESULTS

A.—*Financial Results of Indian Government Railways (including Worked Lines).*

15. Financial Results of Working.—The gross receipts of Railways in 1946-47 were Rs. 203·35 crores as compared to Rs. 225·74 crores in 1945-46. The decrease was both under Goods and Coaching.

Ordinary working expenses in 1946-47 amounted to Rs. 156·62 crores as against Rs. 145·09 crores in 1945-46, or an increase of Rs. 11·53 crores over 1945-46. The amount set apart from Revenue for the Depreciation Reserve Fund was Rs. 13·21 crores against Rs. 17·05 crores in 1945-46, *i.e.*, Rs. 3·84 crores less than in the previous year. The appropriation to the Depreciation Fund in the previous year, was, however, inclusive of the special contribution of Rs. 4 crores provided annually for the three years ending 1945-46 to meet the extra wear and tear during the War. The operating ratio, that is the ratio of working expenses (excluding suspense, but including Appropriation to Depreciation Fund) to gross earnings was 82·33 per cent. against 70·77 per cent. in 1945-46.

Miscellaneous transactions during 1946-47 resulted in a net receipt of Rs. 3·39 crores against Rs. 4·14 crores in 1945-46. Payments to worked lines as their share of earnings amounted to Rs. 1·82 crores in 1946-47 against Rs. 2·36 crores in 1945-46 or Rs. 54 lakhs less as compared with 1945-46.

The net revenue was Rs. 35·09 crores against Rs. 65·38 crores in 1945-46, or Rs. 30·29 crores less than in the previous year.

The interest charges amounted to Rs. 26·52 crores against Rs. 27·18 crores in 1945-46, the decrease being due mainly to the rate of interest having fallen from 3·49 per cent. to 3·30 per cent.

There was a surplus of Rs. 8·57 crores in 1946-47 as against Rs. 38·20 crores in 1945-46.

The appropriation to the Depreciation Reserve Fund was Rs. 13·21 crores in 1946-47 against Rs. 17·05 crores in 1945-46. The amount withdrawn during the year for renewals was Rs. 12·37 against Rs. 12·01 crores in 1945-46 and the net accretion to the fund in 1946-47 was Rs. 84 lakhs against Rs. 5·24 crores in 1945-46. The balance in the Depreciation Reserve Fund at the end of the year was Rs. 108·29 crores.

Against Rs. 21·86 crores in 1945-46, works expenditure during the year under review totalled Rs. 23·28 crores, of which Rs. 10·91 crores was charged to capital and Rs. 12·37 crores was met from the Depreciation Reserve Fund.

16. Traffic Receipts.—All heads of traffic receipts, except passenger earnings, showed a decline during the year as will be seen from the statement given below :—

(Crores of rupees.)

	1945-46.	**1946-47.**
Passenger earnings	79·65	**81·68**
Other coaching earnings	30·61	**19·15**
Goods earnings	111·11	**99·30**
Sundry earnings	6·06	**5·22**
Suspense	– 1·69	**– 2·00**
TOTAL	225·74	**203·35**
Less—		
Earnings of worked lines	4·96	**4·11**
Net traffic receipts of Indian Government Railways	220·78	**199·24**

The decrease in earnings (including the earnings of worked lines) was Rs. 22·39 crores of which Rs. 11·81 was in goods earnings and Rs. 11·46 crores under "other coaching" earnings. This was partly off-set by an increase of 2·03 crores under passenger earnings. The decrease in the net traffic receipts was Rs. 21·54 crores. The increase under passenger earnings occurred under all classes. The distribution of passenger earnings by various classes for all Class I Railways (including those owned by Indian States) is given below :—

(In lakhs of rupees.)

	1945-46.	**1946-47.**
First class	485	**399**
Second class	869	**800**
Intermediate class	612	**655**
Third class	6394	**6753**
TOTAL	8360	**8607**

The details of traffic earnings of individual railways are given in the Statements Nos. 3 and 6, at pages 40-41 and 48-50 of Volume II of this Report.

17. **Working Expenses.**—The Working expenses of each railway are detailed in Statements Nos. 3 and 7 at pages 40-41 and 52-61 of Volume II of this Report.

18. **Net traffic receipts, interest charges and surplus.**—The statement below compares the surplus and the percentages of the net traffic receipts and interest charges to the capital-at-charge for the five years ending with 1946-47 :—

(In lakhs nf rupees.)

Year.	Net traffic receipts.	Percentage of net traffic receipts to capital-at-charge.	Interest charges.	Percentage of interest charges to capital-at-charge.	Surplus.
1942-43	71,22	9·1	28.04	3·6	45,07
1943-44	76,59	9·8	28,53	3·7	50,84
1944-45	74,10	9·4	27.45	3·5	49,89
1945-46	61,24	7.7	27,18	3·4	38,20
1946-47	**31,70**	**3·9**	**26,52**	**3·3**	**8,57**

19. **Losses and gains.**—The statement below compares the net gain or loss of the year on each railway with that of the previous year :—

(In lakhs of rupees.)

Year.	B. A.	B., B. & C. I.	E. I.	G. I. P.	N. W. Commercial.	N. W. Strategic.	O. T.	B.N.	M. & S. M.	S. I.
1945-46.	1,25	4,00	6,18	6,95	5,72	—2,41	3,41	—1,39	6,35	3,73
1946-47.	**—10,40**	**4,31**	**—3,45**	**5,83**	**4,21**		**—7**	**16**	**2,61**	**1,77**

B.—*Railway Betterment Fund and Railway Depreciation Fund, etc.*

20. **Railway Betterment Fund.**—The Railway Betterment Fund was instituted on the 1st April 1946 with a view to finance out of revenue betterments which do not increase the earning capacity of railways, such as the provision of amenities for the travelling public, works connected with the staff welfare and unremunerative operative improvements. The Fund was to receive an initial credit of Rs. 12 crores by transfer from the Railway Reserve and Rs. 3 crores from the net profits of 1946-47.

Detailed rules governing the allocation of expenditure to Betterment Fund were issued during the year under review. The main features of these rules are :—

(a) Works chargeable to the Fund have been listed under three categories, (i) Amenities to passengers, (ii) Works connected with staff welfare, and (iii) Operative improvements. Works falling under (i) and (ii) whether they are new works or are additions to existing works, are debitable to the Fund irrespective of cost, while those falling under (iii) are debitable to this fund only if they are not likely to be remunerative; provided that if a work of the last category is estimated to cost over three lakhs the expenditure on it can be met out of the Fund only with the sanction of the Government of India.

(b) All works are to be considered as a whole, and it is not permissible to separate from the rest items of works which have been listed as debitable to the Betterment Fund when they are undertaken by themselves.

(c) If the new work involves an improvement over the work which it replaces, the entire expenditure attributable to improvement is to be charged to Capital if the improvement is justified on financial grounds, otherwise to the Betterment Fund.

(d) A work is to be regarded as remunerative only if it is directly revenue earning or expenditure saving and a minimum net return of 3 per cent. on the proposed expenditure is expected after meeting all service charges on account of repairs and maintenance, operation and depreciation.

21. Revision of Railways Separation Convention.—In March 1947, the Legislative Assembly elected 11 non-official members to serve along with the Hon'ble the Transport Member, Hon'ble the Finance Member and the Financial Commissioner of Railways on a Committee (called Railway Convention Committee, 1947) to consider the revision of the Convention adopted by the Legislative Assembly on the 20th September 1924 regarding the Separation of Railway from General Finance. The Committee had not commenced its work when the year ended. (The Committee ceased to exist with the dissolution of the old Central Legislature on the introduction of the new constitutional changes.)

22. Railway Depreciation Fund Investigations.—As mentioned in last year's report, the Railway Board had towards the end of 1945 embarked upon a comprehensive enquiry into the Railway Depreciation Fund on the basis of the existing records on the railways. As a result of the examination of the data furnished by the various railways a revised schedule of lives of railway assets has been drawn up.

23. Disposal of Defence Department Works.—Numerous works of general traffic value were carried out during the last war at the request of the Defence Department for increasing line capacity. These works were executed at the cost of the Defence Department (now Ministry of Defence) and the Railways paid interest and depreciation charges thereon at 6 per cent. per annum. The payment of these charges to the Defence Department ceased from 1st October 1946. The Ministry of Defence later decided that, barring seven major works, the others should be transferred to the Ministry of Railways with effect from 20th March 1947, without any financial adjustment. The cost of the works thus transferred to the Railway Department is about 5½ crores.

C.—*General results of working of all Indian Railways.*

24. Analysis of Earnings.—The total earnings of all Railways including those in which the Government of India have no financial interest, amounted to Rs. 222·04 crores of which Rs. 104·04 crores or 46·9 per cent. was from goods traffic, Rs. 89·54 crores or 40·3 per cent. from passenger

traffic and Rs. 28·46 crores or 12·8 per cent. from parcels, luggage and other miscellaneous sources of revenue.

24.1. Passenger Earnings.—In comparison with 1945-46 passenger earnings on all Indian Railways increased by Rs. 2·79 crores to Rs. 89·54 crores, an increase of 3·22 per cent., the number of passengers carried increased by about 95 millions, an increase of about 9·06 per cent. and passenger miles by 724 millions, an increase of about 1·75 per cent. Some of the striking variations in passenger traffic on individual railways are indicated below:—

(Figures in lakhs.)

Railways.	Variations as compared with 1945-46. Passengers carried. Number.	Earnings. Rs.
Bengal Nagpur	+ 28	– 35
Bombay, Baroda & Central India	+202	+1,10
East Indian	+173	–1,35
Great Indian Peninsula	+ 60	+1,28
Madras & Southern Mahratta	+ 93	+ 33
North Western*	+143	+2,33
South Indian	+178	+ 35

* Based on estimated figures.

Detailed figures of the number of passengers carried, passenger miles and earnings are given in Summary X and Statements Nos. 12 and 36 (pages 12-13, 92-99 and 227-233 respectively) of Volume II of this Report.

24.2. Goods Earnings.—The earnings from goods traffic on all railways decreased by Rs. 12·27 crores or 10·6 per cent. as compared with 1945-46. The tonnage of goods carried decreased by 91 lakhs of tons or about 9·08 per cent. and each ton was carried an average of approximately 294·9 miles instead of 289·8 miles last year. The net ton miles registered a decrease of 2185 millions or 7·49 per cent. over last year.

The increased earnings were mainly derived from Oil, fuel; Rice, not in the husk; Gram and pulses; Wheat; Other grain; Marble and stone; Wood unwrought, Metallic ore; Cement; Cotton raw, unpressed; Fodder; Fruits; Vegetables; Iron and steel, wrought; Tobacco; Provisions; Other commodities and Live stock; while decreases were substantial in Fire wood; Jowar and Bajra; Salt; Sugar refined and unrefined; Oilseeds; Cotton raw pressed; Petrol (in bulk); Cotton manufactured; Gur; Jagree; Molasses; Jute raw; Jute manufactured; Kerosene oil in tins; Vegetable oils and Military Traffic.

The notable variations in goods traffic on some railways are given below:—

(Figures in thousands.)

Railways.	Variations as compared with 1945-46. Tons carried.
Bengal Assam *	–4,572
East Indian	–2,915
Great Indian Peninsula	– 934
Madras & Southern Mahratta	– 903
North Western *	– 720
Oudh Tirhut	– 753
South Indian	– 265

* Based on estimated figures.

Detailed goods statistics will be found in Summary X, Statements Nos. 13, 29 and 36 on pages 12-13, 100-111, 161-176 and 227-233 respectively of Volume II of this Report.

CHAPTER III

NEW CONSTRUCTIONS AND ENGINEERING WORKS

25. **Capital Expenditure.**—At the end of March 1947, the total capital at charge of all Railways, including those under construction, amounted to Rs. 881·53 crores of which Rs. 807·76 crores was the capital at charge on Indian Government Railways, inclusive of premia paid on the purchase of certain Companies' lines. The remainder Rs. 73·77 crores represented capital raised by Indian States, Companies and District Boards.

The Capital at charge of Indian Government Railways comprised the following :—

	£
Liability and debt incurred in the purchase of railways	150,106,630
Less liability and debt cancelled by the operation of annuities and sinking funds	29,284,941
Net amount outstanding	120,821,689*

	(In thousands of rupees.)
Direct expenditure by Government	6,46,65,89
The above sterling figures converted into rupees . .	1,61,10,00*
Grand Total .	8,07,75,89

By far the greater portion of this amount, namely, Rs. 8,05,64,45,000 is Government capital and only Rs. 2,11,44,000 is owned by Companies, etc. These figures include Rs. 32,61,16,000 on account of capital expenditure to the end of March 1947 on strategic lines.

The total capital outlay on all railways during 1946-47 was Rs. 11·35 crores of which Rs. 10·91 crores related to Indian Government Railways.

The distribution of the capital outlay in 1946-47 over the different Indian Government Railways is shown in the summary below :—

(Figures in lakhs.)

Railways.	Open Lines.			New Lines.	GRAND TOTAL.
	Works, etc.	Rolling stock.	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.
Bengal Nagpur . . .	1,91	—1	1,90	..	1,90
Bombay, Baroda & Central India	16	48	64	..	64
Bengal Assam	1,96	..	1,96	..	1,96
East Indian	89	1,47	2,36	..	2,36
Great Indian Peninsula . .	59	58	1,17	..	1,17
Madras & Southern Mahratta .	31	25	56	..	56
North Western . . .	2,04	5	2,09	..	2,09
South Indian	—4	—27	—31	..	—31
Oudh Tirhut	33	..	33	..	33
Other Indian Railways . .	21	..	21	..	21
TOTAL .	8,36	2,55	10,91	..	10,91

* £2,575,000, £2,000,000, £1,500,000 and £1,000,000 representing share capital of the Great Indian Peninsula, the Bombay, Baroda and Central India, the Madras and Southern Mahratta and the South Indian Railways respectively (the first two sums paid off during the year 1925-26 and 1941-42 respectively and the last two during the year 1944-45) have been converted at the appropriate average rate of exchange for those years and the balance £113,746,689 at the rate of 1*s.* 6*d.* to the rupee.

26. Mileage of lines opened or sanctioned in 1946-47.—The following new constructions were sanctioned during the year :—

Railway.	Name.	Miles under construction.	Sanctioned on
1. North Western Railway	Rupar-Talaura . .	34·29 Broad Gauge	31-5-1946
2. Jamnagar & Dwarka	Pipli-Gop . . .	22·63 Metre Gauge	24-6-1946
3. Jaipur State Railway	Sanganer Town-Malpura Swai-Mangarh.	75·66 Metre Gauge	26-4-1946
4. Great Indian Peninsula Railway .	Bhimsen-Khairada (Restoration).	76·40 Broad Gauge	21-5-1946
5. Mewar State Railway	Mavli-Bada Sadri . .	47 Metre Gauge	November, 1946

No new lines were opened to public traffic during the year.

27. Surveys and lines under construction during 1946-47.—The Mudkhed-Adilabad line of His Exalted Highness the Nizam's State Railway was under construction during the year. The following are the Surveys sanctioned during the year under review :—

Railway.	Gauge.	Mileage.
Bengal Nagpur Railway.		
1. Khurda Road-Sonepore-Lochipur . .	5′-6″	156
2. Rayaghada-Nowrangpur-Jagdalpur Byramgarh	5′-6″	170
3. Gopalpur-Russelkonda . . .	5′-6″	58
4. Naupada-Gunupur (Conversion) . .	5′-6″	56
5. Rourkela-Talcher	5′-6″	156
6. Rupsa-Talbandeh (Conversion and extension from Bangriposi to Rairangpur) .	5′-6″	103
7. Contai Road-Contai	5′-6″	34
Bombay, Baroda & Central India Railway.		
1. Bombay Sind Connection (Cutch Route) .	5′-6″	366
North Western Railway.		
1. Rohtak-Gohana-Panipat (Restoration) .	5′-6″	44
East Indian Railway.		
1. Unao-Madhoganj-Balamau Restoration-Traffic Survey)	5′-6″	79
2. Chandpur-Siau-Bijnor (Restoration-Traffic Survey)	5′-6″	22
3. Utraitia-Sultanpur-Zafarabad (Restoration-Traffic Survey) . .	5′-6″	136
Great Indian Peninsula Railway.		
1. Manmad-Nardana	5′-6″	79
2. Belapur Road-Sheogaon . . .	5′-6″	45·5
3. Kurla-Karjat	5′-6″	35
4. Diva-Dasgaon	5′-6″	93
5. Ahmednagar-Sheogaon (Traffic Survey) .	5′-6″	45
6. Bhimsen-Khairada (Restoration)—		
(a) Bhimsen Diversion . . .	5′-6″	11·4
(b) Hamirpur Diversion . . .	5′-6″	10
7. Amraoti-Narkher	5′ 6″	80
8. Amraoti-Diversion	5′-6″	17·8
Oudh Tirhut Railway.		
1. Jogbani-Kosidam . . .	3′-3⅜″	35
South Indian Railway.		
Aerial survey		
1. Chamrajnagar-Satyamangalam-Mettupalaiyam	3′-3⅜″	80·60
	TOTAL	1,912·30

28. Lines closed during 1946-47.—No lines were closed during the year.

29. Engineering works.—The following is a list of some of the important works carried out or sanctioned during the year under review for augmenting the line capacity, improving the operational facilities, providing additional housing accommodation for staff and strengthening bridges, etc :—

29.1. Open Line Improvements.

Bengal Nagpur Railway.

	Amount in Rs.
1. Remodelling Cuttack Station Yard	3,84,131
On account of the lack of necessary operating facilities in Cuttack Yard, it was decided to undertake the work and an estimate was sanctioned in February 1947.	
East Indian Railway.	
2. Gomoh Station—Remodelling of Locomotive Yard .	1,42,918
The lay-out of the yard caused great delays to the engines coming into and going out of the shed resulting in waste of engine hours. The remodelling was designed to eliminate this and to provide certain improved facilities for inspection and coaling with a view to improved shedding and operation.	
3. Extension of Up & Down Loops at Dhanbad Station .	2,75,520
In order to run loads of 70 wagons instead of 60 on the Grand Chord, it was necessary to extend Up & Down Loops at this station.	
4. Provision of third line at Shiupur Station Yard . . .	1,27,212
It was considered necessary to lay a third line at Shiupur Station Yard to provide improved facilities for operation.	
5. Removal of infringement and extension of loops at Murarai	1,33,603
It was considered essential to extend the existing loop so as to have a capacity of 55 wagons. Provision was also made for the removal of the existing infringements of track centres.	
North Western Railway.	
6. Providing improved goods facilities at New Delhi Station	23,08,798
On account of a heavy increase in the volume of traffic at Delhi Main Station resulting in serious detentions to through goods trains, it was necessary to provide additional facilities to cope with the increased goods traffic, but on account of insufficient scope for expansion in Delhi Main, it was decided to provide the necessary facilities at New Delhi Station by removing the transit and outward goods shed from Delhi Main to New Delhi.	
Permanentway Renewals.	
Bombay, Baroda & Central India Railway.	
7. Relaying 28 miles of 90 lbs. F. F. rails with 90 lbs. R.B.S. rails between Borivli and Virar on the Bombay Division	13,10,000
Owing to the large number of rail fractures and unsatisfactory conditions of rails the renewal of rails has been sanctioned to avoid speed restrictions.	

29.2. Important works sanctioned.

Bengal Assam Railway.

1. Improvements to water supply arrangements at Kanchrapara	5,87,677

Bengal Assam Railway—concld.

	Amount in Rs.
The existing arrangements were found to be inadequate to cope with the increased demand on account of the increase in population and the work was taken up to ensure adequate supplies of unfiltered water to the workshop and filtered water for the domestic uses.	
2. Construction of 204 units of staff quarters at Dakhindari under Post-war Planning Scheme for the year 1946-47	14,89,933
For housing the essential staff of Traffic, Engineering, Electrical, Medical and Mechanical it was decided to construct during 1946-47, 204 units of quarters in 3 storied blocks of 6 units each.	
Bengal Nagpur Railway.	
3. Construction of 120 staff quarters at Khargpur in replacement of type I quarters	4,50,000
This work was undertaken to provide quarters to essential staff.	
East Indian Railway.	
4. Improvements to Drinking Water Supply and arrangements for supply of water at Gomoh, from Jamuni river	2,86,692
There was no piped supply of drinking water at Gomoh and water was obtained from wells located all over the colony and which dried up during hot weather, thereby causing considerable inconveniences to the staff. It was, therefore, considered necessary to improve the drinking water supply of the station.	
5. Additional Hostel accommodation and Laboratory equipment required for Special Class Apprentices at Jamalpur	1,40,290
Extra Hostel accommodation including Dining Room, Kitchen and other ancillary works was required in connection with the increased number of Special Class Apprentices.	
Great Indian Peninsula Railway.	
6. Wireless & Telecommunication works	2,48,142
In order to enable the Railway to carry increased traffic, it was considered desirable to improve the traffic control system by providing additional circuits and splitting the existing circuits at convenient points.	
Oudh Tirhut Railway.	
7. Combined Main General Stores and Workshop Stores offices	36,62,095
Prior to the amalgamation of the Bengal and North Western and Rohilkund and Kumaon Railways and their transfer to state control, there was no organised Stores System as existed on the Indian Government Railways. It was, therefore, necessary to re-organise completely the Stores Department of the Oudh Tirhut Railway and to make provision for a combined Main General Stores and Workshop Stores Offices, etc.	
8. Railway Telecommunication Development Scheme .	3,31,171
The scheme provided additional telephone communications to improve operating efficiency and increase track capacity.	

29.3. Bridge strengthening and protection programme.

Bengal Assam Railway.

1. Training works to protect railway bank from flood damage at mile 245-246G between Bijni-Chaprakata on the Lalmonirhat-Amingaon Section	2,27,989

Bengal Assam Railway.—concld.

Amount in Rs.

During the flood season of 1945, the right bank of the Aie River was badly eroded and the flood threatened the main line. Temporary measures to protect the line were taken at that time but it was necessary to undertake permanent training works as a precautionary measure.

Bombay, Baroda & Central India Railway.

2. Rebuilding abutments and regirdering Wanki Bridge No. 325 at mile 123/1-2 T.P. between Pardi and Bulsar — 6,69,000

The south abutment of Wanki Bridge developed a vertical crack almost at the centre. It was, therefore, essential to rebuild the abutment and to regirder the bridge, as the existing girders were below the required standard.

Madras & Southern Mahratta Railway.

3. Rebuilding 10 laterite Bridges on the North Eastern Line between Madras and Gudur . . . . . . — 1,20,000

The condition of these bridges was bad and they were declared unsound. It was considered that their reconstruction should be taken up at once in the interests of safety.

30. Wireless Communications on Railways.

General.—The development of wireless communication on all Indian Government Railways is now almost completed. The use of this form of communication has been intensified and this has resulted in relief to the heavily overloaded line telegraph facilities.

Equipment.—Thirty medium power wireless sets were purchased from General Headquarters, India, during the year. It is anticipated that there will be difficulty in securing sufficient supply of spare parts for maintenance of this equipment.

Current Development.—Experiments in connection with the maintenance of communication between Control Offices and running trains were carried out by the Madras and Southern Mahratta Railway. The method employed was the application of a radio frequency to an existing pair of wires running more or less parallel to the railway line. A loop aerial fitted on the train picked up signals radiated from this pair of wires. (This system has been employed in America with varying degrees of success.) It was found that two-way communication to and from the train was possible for distances of approximately 40/50 miles from the Control Office. After careful consideration it has been decided that there is no scope for useful application of this form of communication on the Indian Government Railways.

Arrangements have been made to carry out experiments on the East Indian Railway in connection with the use of Low Power Very High Frequency Wireless Sets for communication between Yard Masters or Yard Cabins and the drivers of Shunting Engines in large yards. Initial experiments will be performed with equipment designed for use in road vehicles, as the arrival of equipment specifically designed for use in steam locomotives is awaited. This method of communication has been used with great success in the United States of America and has been the subject of recent large scale experiments in the United Kingdom.

31. Improvements to Line Telecommunications on Railways.

Considerable progress was made in the installation of new Administrative Trunk Telephone circuit and Deputy Controllers' and Section Controllers' circuits. The scheme is now approximately 90 per cent. complete.

All proposed telegraph (other than Teleprinter) circuits were completed and brought into use. There was no progress with the Teleprinter Network due to technical difficulties.

CHAPTER IV

TRANSPORTATION

A.—Operating.

32. Operating—General.—Although the war had ended, considerable military traffic continued to move during the first few months of the year under review. Later there was a gradual reduction, and by the end of the year, the Ministry of Defence found it possible to release 867 coaches out of a total of 1,458 coaches loaned to them during the war. With the return of the coaches, certain of the civil passenger train services curtailed during the war were restored, a total restoration of about 90 per cent. of the curtailment being achieved by the end of the year. A number of Defence Service coaches on important Mail, Express and Passenger trains continued to run for the use of military personnel, but towards the end of the year, unoccupied accommodation in the upper classes in these coaches was thrown open to the public.

The demand for the movement of goods traffic continued to be extremely heavy, and much of this movement did not follow the pre-war normal channels, *e.g.*, foodgrains were imported in large quantities and frequently moved over long distances from the ports to their final destinations. In consequence, railway facilities continued to be severely taxed.

Railway working was adversely affected by Civil disturbances. These broke out in the Calcutta area in August 1946, and subsequently spread to East Bengal, Bihar, parts of the United Provinces, the North-West Frontier Province and the Punjab. Labour unrest in various industries and notably in the Calcutta Docks, also affected railway operation adversely.

33. Volume of traffic handled.—Compared with the previous year, goods traffic in ton-miles declined by 7·57 per cent. whilst in the case of passenger traffic, measured in terms of passenger-miles there was a further increase of 1·46 per cent. But compared with the pre-war year (1938-39) the increase in passenger-miles was 124·3 per cent., that is nearly $2\frac{1}{4}$ times and that in net ton miles 22·4 per cent. Detailed figures are given below. It should, however, be noted that these figures do not include the traffic moved by military special trains:—

(Figures in thousands.)

Particulars.	Class I Railways.				
	1938-39* (pre-war).	1945-46.	**1946-47.**	Percentage increase (+) or decrease (—) as compared with 1938-39.	**1945-46.**
Passenger miles	18,111,586	40,046,014	**40,631,218**	+124·3	**+1·46**
Net ton miles†	21,496,056	28,461,768	**26,308,521**	+22·4	**—7·57**

* For comparative purposes, Bikaner State, Bengal Dooars and Dibru-Sadiya Railways (which were not Class I Railways at that time) have been included.

† Excludes departmental.

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34. Train miles.—The number of train miles run to carry the traffic referred to above was as follows :—

(Figures in thousands.)

Particulars.	1938-39* (pre-war).	1945-46.	**1946-47.**	Percentage variation with 1938-39.	Percentage variation with **1945-46.**
Passenger (including proportion of mixed) train miles.†	111,814	91,547	**103,268**	—7·64	**+12·8**
Goods (including proportion of mixed) train miles.‡	69,603	79,502	**75,345**	+8·25	**—5·23**

* For comparative purposes, Bikaner State, Bengal Dooars and Dibru-Sadiya Railways (which were not Class I Railways at that time) have been included.

† Includes the mileage of trains conveying passengers and of all other traffic booked at coaching rates, and empty mileage run by passenger and other coaching stock. It also includes mileage of electric locomotive and electric multiple unit trains as well as military specials but excludes departmental.

‡ Includes mileage of electric locomotive trains but excludes departmental.

It will be noticed that, compared with the pre-war year, the railways carried 124·3 per cent. more passenger traffic with 7·64 per cent. less passenger train services whilst a volume of 22·4 per cent. more goods traffic was carried with an increase of only 8·25 per cent. in goods train miles. Compared with the preceding year, passenger train miles increased by 12·8 per cent. against an increase of only 1·46 per cent. in passenger miles. This tends to show that overcrowding was slightly less in intensity than in the previous year. Goods train miles, on the other hand, decreased by only 5·23 per cent. though " Net ton miles " decreased by 7·57 per cent. This disparity in the rate of decrease was partly due to an increase in the " Smalls " traffic which was more freely booked by the railways, and partly to a drop in the train load itself.

Detailed figures of train miles of Class I Railways are given in Statements Nos. 17 and 32, pages 120-121 and 219-222, and those of Class II and III Railways in Statement No. 37, pages 234-238 of Volume II of this Report.

35. Shunting miles.—In order to run passenger and goods trains considerable " other engine mileage " of an unproductive nature, *viz.*, shunting, light and assisting mileage has to be incurred. This mileage in the year under review was nearly 24 per cent. of the total engine miles (including departmental) against 26 per cent. in 1945-46.

As shunting miles form the greater proportion of unproductive mileage, that is to say, about 15 per cent. of the total engine miles, the following table has been prepared to show the ratio per 100 train miles on the passenger and goods services of Class I Railways during the last three years. It will be observed that except in the case of metre gauge goods service, there has been a welcome drop under all other headings.

Particulars.		Class I Railways. 1944-45.	1945-46.	**1946-47.**	Percentage variation with 1944-45.	Percentage variation with **1945-46.**
Shunting miles per 100 train miles (Passenger and proportion of mixed).	B. G.	7·86	7·00	**6·03**	—23·3	**—13·9**
	M. G	8·17	7·87	**6·39**	—21·8	**—18·8**
Shunting miles per 100 train miles (Goods and proportion of mixed).	B. G.	41·2	39·7	**39·6**	—3·88	**—0·25**
	M. G.	38·0	43·1	**44·7**	+17·6	**+3·71**

In the paragraphs below the results of passenger and goods train services on Class I Railways are reviewed separately for the two principal gauges.

36. Passenger trains.

(Figures in thousands.)

Particulars.	Class I Railways.					
	Broad Gauge.			Metre Gauge.		
	1945-46.	**1946-47.**	**Percentage variation with 1945-46.**	1945-46.	**1946-47.**	**Percentage variation with 1945-46.**
Passenger miles . . .	28,824,807	**28,876,276**	**+0·18**	10,793,428	**11,308,443**	**+4·77**
Coaching vehicle miles (including proportion of mixed).	1,085,569	**1,133,325**	**+4·40**	461,601	**503,525**	**+9·08**
Passenger train miles* (including proportion of mixed).	65,001	**70,764**	**+8·87**	24,567	**30,366**	**+23·6**

* Includes the mileage of trains conveying passengers and of all other traffic booked at coaching rates, and empty mileage run by passenger and other coaching stock. It also includes mileage of electric locomotives and electric multiple unit suburban trains, as well as military specials but excludes departmental.

It will be noticed from the figures given above that there was a more than proportionate increase in coaching vehicle miles and passenger train miles compared with the increase in passenger miles both on broad gauge and metre gauge sections. As indicated in paragraph 34, this shows that there was a slight relief in overcrowding in trains.

36.1. Punctuality of passenger trains.—The following table shows the percentage of passenger trains not losing time to the total number of trains run on all Class I Railways during 1946-47 as compared with 1945-46 :—

	All trains (including electric multiple unit trains).	Mail and important through trains.	Mixed trains.	Suburban trains.	Other passenger trains.
Broad Gauge.					
1945-46	70·0	58·8	70·7	71·7 78·4*	62·6
1946-47	**63·7**	**54·8**	**68·7**	**65·7** **79·9***	**61·8**
Metre Gauge.					
1945-46	76·4	56·5	78·7	86·2 91·5†	71·3
1946-47	**67·8**	**45·9**	**74·7**	**88·8** **94·5†**	**64·9**

* Bombay, Baroda and Central India and Great Indian Peninsula Railways' electric multiple unit trains.

† South Indian Railway's electric multiple unit trains.

It will be noticed that except in the case of suburban electric trains on both gauges and of suburban steam trains on the metre gauge there was an alarming decline in the punctuality of passenger trains. Over-worked locomotives badly in need of repairs, coupled with inferior quality of coal supplied to railways were mainly responsible for this deterioration.

36.2. Restoration of passenger train services.—20,113 broad gauge and 5,278 metre and narrow gauge daily passenger train miles were restored during the year. The passenger train mileage at the end of the year varied from 73·2 to 102·5 per cent. of the pre-war figures on the different Railways.

37. Goods trains.

(Figures in thousands.)

Particulars.		Class I Railways.				
		1938-39*. (Pre-war)	1945-46.	1946-47.	Percentage variation with 1938-39.	Percentage variation with 1945-46.
Goods (including proportion of mixed) ton miles.†	B.G.	18,283,959	24,026,787	**22,762,384**	+24·5	**—5·26**
	M.G.	3,125,525	4,329,181	**3,443,815**	+10·2	**—20·5**
Wagon miles (including proportion of mixed).	B.G.	2,117,936	2,339,872	**2,257,503**	+6.59	**—3·52**
	M.G.	671,089	879,049	**693,945**	+3·41	**—21·1**
Gooas train miles (including proportion of mixed.)	B.G.	48,018	54,435	**53,182**	+10·8	**—2·30**
	M.G.	19,831	23,204	**20,282**	+2·27	**—12·6**

* For comparative purposes, Bikaner State, Bengal Dooars and Dibru-Sadiya Railways (which were not Class I Railways at that time) have been included.

† Excludes departmental.

Compared with the preceding year, on the broad gauge railways goods ton miles decreased by 5·26 per cent., wagon miles by 3·52 per cent. and goods train miles by 2·30 per cent., whilst on the metre gauge railways the corresponding decreases were 20·5 per cent., 21·1 per cent. and 12·6 per cent. respectively.

37.1. Goods Train Speeds.—Compared with the previous year the average speed of goods trains on the broad gauge remained almost the same, that is, 10·3 miles per hour in 1946-47 against 10·2 miles in 1945-46, whilst on the metre gauge there was a decrease of nearly half a mile per hour from 10·2 miles in 1945-46 to 9·72 miles in 1946-47.

37.2. Goods Train Loads.—There was a decrease in the average net or freight load per goods train (steam) both on the broad and metre gauge railways as compared with the previous year. The decrease in the case of broad gauge was 13 tons from 440 tons in 1945-46 to 427 tons in 1946-47 and on the metre gauge 17 tons from 187 tons in 1945-46 to 170 tons in 1946-47.

38. Stock usage.—There was a slight increase of 1·62 per cent. in the average number of engines available for use on the broad gauge and the average daily mileage run by engines also increased by nearly one per cent., as compared with the previous year. On the metre gauge, however, though the average number of engines available for use decreased by nearly 4·5 per cent., there was an increase in daily mileage run by the engines to the extent of nearly 5 per cent. This was mainly due to the fact that a large number of passenger train services were restored on the metre gauge, the total increase in the passenger train miles on that gauge being 23·6 per cent. In the following sub-paragraph the stock usage results of Class I Railways during the year are briefly reviewed.

38.1. Engine Usage.—Measured in terms of engine miles per day per engine on line (*i.e.*, inclusive of time occupied under repairs, etc.) the daily mileage on the broad gauge decreased from 77 in 1945-46 to 75 in 1946-47 whilst on the metre gauge it increased slightly from 69 in 1945-46 to 70 in 1946-47. The percentage of engines under or awaiting repairs in Mechanical and Transportation Workshops went up from 16·4 per cent. on the broad gauge and 15·8 per cent. on the metre gauge to 18·4 per cent. and 19·8 per cent. respectively. The corresponding figures for the pre-war year (1938-39) were 18·9 per cent. for broad gauge engines and 12·8 per cent. for metre gauge engines.

The downward trend of " ton miles per locomotive day " both for the locomotives on line and for the locomotives in effective use noticed in the

previous year continued during the year under review on the broad as well as on the metre gauges.

	Broad Gauge.		Metre Gauge.	
	Net ton miles per goods locomotive day on line.	Net ton miles per goods locomotive daily in use.	Net ton miles per goods locomotive day on line.	Net ton miles per goods locomotive daily in use.
1945-46	15,963	24,136	6,978	11,333
1946-47	**15,030**	**23,241**	**6,294**	**10,614**

Details of engine usage are given in Statement No. 22, pages 136 to 139 of Volume II of this Report.

38.2. Wagon Usage.—When compared with the preceding year, the increase in the percentage of wagons under repairs on both gauges together with a decrease in goods train speed on the metre gauge brought about a decline in " wagon miles per wagon day " which statistical unit denotes the average number of miles run per wagon daily both loaded and empty journeys. On the broad gauge this figure was 37·3 in 1946-47 against 41·6 in 1945-46 and on the metre gauge 26·2 in 1946-47 against 31·5 in 1945-46.

The percentage of wagons under or awaiting repairs in Mechanical and Transportation Workshops and sick lines to the total goods stock on line increased from 5·26 in 1945-46 to 6·99 in 1946-47 for broad gauge wagons and from 4·36 in 1945-46 to 7·57 in 1946-47 for metre gauge wagons. The corresponding broad gauge and metre gauge figures in the pre-war year (1938-39) were 5·74 per cent. and 2·94 per cent. respectively.

" Net ton miles per wagon day " which shows the number of miles run by a wagon as well as the load carried by it, also decreased from 433 in 1945-46 to 380 in 1946-47 on the broad gauge and from 159 in 1945-46 to 133 in 1946-47 on the metre gauge.

38.3. Wagons loaded with " Smalls ".—There was a further relaxation of restrictions on the movement of " smalls " with the result that the percentage of wagons loaded with " smalls " traffic to the total number of wagons loaded increased from 9·14 in 1945-46 to 9·40 in 1946-47 on the broad gauge and from 12·3 in 1945-46 to 15·6 in 1946-47 on the metre gauge. There was, however, a falling off by 5·81 per cent. in the total number of wagons loaded with " smalls " on the broad gauge whilst on the metre gauge an increase of 6·51 per cent. was recorded.

	No. of wagons loaded with "smalls".		Percentage variation in comparison with	No. of wagons loaded with 'smalls' expressed as a percentage of the total number of wagons loaded.	
	1945-46.	**1946-47.**	1945-46.	1945-46.	**1946-47.**
Broad Gauge . .	452,987*	**426,689**	—5·81	9·14*	**9·40**
Metre Gauge . .	350,622*	**373,444**	+6·51	12·3*	**15·6**

* Revised figures.

39. Improvements in Marshalling and other Yards and their working.—Considerable attention was devoted to improvement in the working of marshalling and other yards. A few of the important suggestions considered by the railways in this connection are given below :—

(a) Marshalling of goods trains through to the furthest distance possible including portions of adjoining railways so as to eliminate detentions at intermediate points.

(b) Working of goods trains to fixed time-tables in order to systematise yard working to the greatest possible extent.

(c) Improving the efficiency and training of yard staff.

An improvement of note was made on the Oudh Tirhut Railway where work was nearly completed on the provision of a separate siding with a platform and a shed for dealing with " smalls " goods traffic at Gorakhpur. Traffic from four directions converges at this station and transhipment and repacking of " smalls " (goods not in full wagon loads) is therefore necessary. The provision of separate accommodation for this traffic is expected to facilitate considerably working in this yard.

40. Wagon position.

40.1. Broad Gauge Wagon Pool.—The number of public service wagons (in terms of four-wheelers) in use at the end of the year was 179,912 *i.e.*, 12,093 more than at the end of 1945-46. The total number of wagons loaded during the year was 4,467,876, being a decrease of 280,051 or 5·9 per cent. as compared with the previous year.

The number of wagons temporarily out of service on all broad-gauge railways varied between 10,174 and 12,831.

40.2. Metre Gauge Wagon Pool.—The number of public service wagons (in terms of four-wheelers) on 31st March 1947 was 62,203 *i.e.*, 4,569 less than at the end of 1945-46. The total number of wagons loaded during the year was 1,828,656 being a decrease of 390,527 or 17·6 per cent. as compared with the previous year.

41. Neutral Examination of Interchanged stock.—The staff working under the Director of Wagon Interchange continued to examine wagons interchanged between railways at the following junctions:—

Broad Gauge.	*Metre Gauge.*
Agra Cantonment.	Katihar.
Agra East Bank.	Kasganj.
Ajni (Nagpur).	
Chheoki.	
Ghaziabad.	
Khanalampura.	
New Delhi.	
Waltair.	
East Dock Junction.	
Ujjain.	

Certain staff under the Director of Wagon Interchange were also posted at Moghalpura, Lillooah and Jhansi Workshops for the purpose of examining wagons after periodical overhaul.

42. Area Control Officer, Calcutta Area.—The temporary post of Railway Liaison Officer (Calcutta Area) created in November 1945 in lieu of the post of Director-General of Railways, was found to be no longer required and was abolished with effect from 31st December 1946.

The Area Control Organisation which formerly worked under the Railway Liaison Officer controlling traffic and movement of empties through the interchange junctions of the Calcutta Area, continued to function at first under the administration of the Chief Transportation Manager, Bengal Assam Railway, and later under the General Manager, East Indian Railway.

43. Transport of coal.—During the year, the Coal Commissioner working under the administrative control of the Department of Industries and Supplies, Government of India, continued to exercise control over the distribution of coal.

The production and movement of coal from the coalfields continued to increase until the disturbances broke out in August 1946. From then

onwards, transport by rail was severely hampered. Later the strike in the Calcutta Docks had further adverse effects on the movement of coal.

43.1. Coal supply and coal stock position.—The improvement in coal stock position, which, with the improvement in raisings, became visible early in 1946 continued, until the reserves reached a satisfactory working level of 17·9 days' requirements on 20th July 1946. This improvement was also partly due to the special arrangements that were made to despatch additional supplies to railways to enable them to meet any emergency in the event of the threatened railway strike in the last week of June 1946 which, however, did not materialise. Unfortunately, this improvement could not be maintained on account of seasonal exodus of labour from the coalfields followed by communal disturbances in Bengal and Bihar, and consequently the stock declined rapidly to a level of 15·7 days' requirements by 20th August 1946. It was not until September and October 1946 that the output from the collieries increased to such an extent as to permit of the building up of reserves to a more adequate level, and the highest figure for the year, *viz.*, a tonnage equivalent to 21 days' consumption requirements was recorded on 20th October 1946.

Subsequently, the usual exodus of labour from the coalfields on account of harvesting accompanied by a shortage of coastal shipping for the carriage of coal by sea, seriously affected supplies with the result that the reserves commenced to deteriorate rapidly on almost all railways and declined to the unsatisfactory level equivalent to 12·2 days' consumption requirements on 20th January 1947. The North Western and Oudh Tirhut Railways were most affected and reserves decreased to the low level of 7 and 9 days' requirements respectively during the middle of December 1946, necessitating severe reductions in goods services and commandeering of public coal to avert complete dislocation on the former railway.

The difficulties experienced in maintaining efficient operation with the steam coal stocks at such a low level was strongly represented in February 1947 to the Coal Sub-Committee of the Central Priorities Committee, and it was decided that railways must be given an additional quota of 50,000 tons per month over and above their bare consumption requirements in order to build up a satisfactory reserve to enable them to meet the seasonal decline in receipts during the low-raising months. To implement this decision, additional supplies to the extent of approximately 60,000 tons of coal were made to railways by the end of March 1947, and in consequence the reserves had increased gradually to 14·2 days' requirements, by the end of that month.

It was not found possible to effect any substantial improvement in the quality of coal supplies to railways on account of labour shortage and post-war labour unrest and strikes which seriously affected production, particularly of better grades of coal, from all the important coalfields. Railways, therefore, continued to be compelled to utilize larger quantities of the lower grades at the cost of operational efficiency.

44. Efforts to obtain fuel economy.—The fuel economy measures already introduced and vigorously pursued on railways during the previous years continued to receive special attention during the year under review and vigorous efforts were made to reduce coal consumption down to a minimum and to ensure that coal was not being wasted. In spite of the various fuel economy measures in force and the efficient control now established there has been a small percentage increase in the railway consumption as compared with the preceding year. This slight increase was due mainly to:—

(*a*) Deterioration in quality of coal for consumption in locomotives supplied to Railways;

(*b*) Abnormal increase in the number of supplying collieries whereby drivers are continually being issued with different varieties of coal resulting in inefficient handling and firing until such time

as the engine crew have mastered the firing technique applicable to a particular variety of coal;

(c) Low ground balances at sheds at frequent intervals owing to erratic and short supplies of fuel whereby it became necessary on many occasions to issue certain grades of coal to services for which they would not be utilised under normal conditions.

(d) Deterioration in the efficiency and maintenance of locomotives consequent upon the acute supply position in regard to locomotive spares.

B.—*Commercial.*

45. Post-war rating.—During the year the Officer on Special Duty in connection with the revision of the rating structure was placed directly under the Board. The Board also appointed a Standing Advisory Committee of experienced rates officers from railways with the following terms of reference :—

(1) To expedite the progress of the investigation into :—

(a) the revision of the rating structure on the basis *inter alia*, of

(i) the application of telescopic "class" rates on continuous mileage;

(ii) acceptance of the shortest route principle for the routing of interchange traffic, subject to all the relevant facts; and

(iii) adjustments as may appear necessary in the present relationship between Railway Risk and Owner's Risk rates;

(b) the revision of the classification of commodities as may appear necessary to fit in with the general structure finally selected;

(c) the division of freight between carrying railways on a mileage basis subject to such safeguarding clauses as may appear to be necessary;

(d) the possibility of standardising terminal charges;

(e) any other matter which may arise in the course of the present investigation which may have bearing on or be affected by the proposed revision of the goods rating structure;

(f) the consequential revision of Conference and Goods Tariff Rules;

(2) (a) to consider and advise on aspects of policy which may arise during the investigation, such as continuance of the lower rates to and from ports, continuance or otherwise of "blanket" rates, etc., etc.

(b) to suggest methods of consultation with Trade interests which are considered most appropriate for this type of investigation and to indicate when these might appropriately be commenced.

46. Alteration in rates and fares.—The following important alterations were made in rates and fares during the year :—

Passenger Traffic.—With effect from 1st March 1947, all passenger fares above eight annas including season ticket fares, were increased by $6\frac{1}{4}$ per cent. on the total fare inclusive of the increased charge levied from the 1st March 1940.

The Indian Railway Conference Association concessions were revived for the following parties :—

(1) Cricket, Football and Hockey Teams when travelling to play matches.

(2) Delegates attending the Jubilee and Annual Conference of the National Young Women's Christian Association.

Certain concessions introduced during the war for the carriage, either free or at reduced rates, of certain commodities for the benefit of the Red Cross, etc., were withdrawn.

Goods Traffic.—Special Class 'A' scale of rates on continuous mileage over all the Indian Government Railways in local and through booking with foreign railways, applicable to manures, oilcakes and bonemeal for manure, and on non-continuous mileage for certain commodities such as bone dust, nitrate of soda, saltpetre crude, etc., chargeable as for manures, were introduced as an experimental measure.

In keeping with the policy adopted during the war and in order to mould the present rating structure to conform to the trends of post-war rating, several station-to-station rates, which were uneconomical or unnecessary were withdrawn.

From 1st February 1947, the following scale of transhipment charges were laid down, for universal application at all break of gauge junctions in respect of all good traffic, including military but excluding Coal, Coke and Patent Fuel, Railway Material and Stores and Live Stock :—

(*a*) Traffic charged at maund rates	3 pies per maund on actual weight subject to the minimum weight for charge, if any.
(*b*) Traffic charged on the carrying capacity of the wagon.	2 pies per maund on the carrying capacity of the wagon.
(*c*) Traffic charged at wagon mile rates.	Rs. 4 per 4-wheeled broad gauge wagon. Rs. 2 per 4-wheeled meter gauge or narrow gauge wagon used at the forwarding station.

Military Traffic.—Several concessions granted for the duration of the war in respect of military traffic were withdrawn.

47. Efforts to secure better wagon usage and wagon loads.—To meet the demands for transport which continued to be heavy during the year, the special measures adopted by railways during the previous year for securing better usage of wagons and improved wagon loads were pursued and extended. Nominated loading was adopted wherever possible. On the Oudh Tirhut and South Indian Railways, unloading and delivery of goods on Sundays and holidays were continued and special efforts were also made to increase loading on these days. The speeding up of the movement of wagons, co-ordination of movements between districts and close liaison between Departments, with the purpose of achieving a more intensive usage of wagon stock and locomotive power continued to receive the special attention of railway administrations. On the Bengal Assam Railway, the uniflow or periodical one-way system of train running whereby goods trains were only run in one direction during certain periods of the day, to expedite transit time, was continued.

All possible measures for eliminating avoidable wagon delays were adopted; wagon rates based on carrying and loading capacities of different types of wagons referred to in the last year's report were extended wherever possible. On the Bengal Assam Railway, weighment of wagon loads of salt booked from salt booking stations on the Bengal Nagpur Railway was eliminated, charges being levied on the basis of the fixed standard weight per bag. The policy of enhancing minimum weight conditions applicable to commodities wherever the nature of goods offered scope for such action to improve wagon loads, initiated three years earlier, was continued during the year under review.

Utilization of oil tanks and special types of wagons received the constant attention of the railways. The strict control on the regulation of "smalls" traffic through the quota system of acceptance, nominated loading and increasing the minimum load of through-road vans was continued during the year, and these measures permitted of a reduction in the number of re-packing points and eliminated delays.

48. Co-ordination of rail, road and water transport.—As reported in the last year's Administration Report the proposals framed for setting up Joint Stock Companies in collaboration with Provincial Governments had to be held up in consequence of the demand for funds being rejected by the Assembly in February 1946, pending consideration of the schemes by the new Provincial Governments concerned.

As a result of further consultations, a number of Provincial Governments intimated that they were in favour of co-ordinating both forms of land transport on the basis of financial association by the railways with road undertakings. At the 9th meeting of the Transport Advisory Council held at Delhi in November 1946, all provinces, except one, agreed that railways would be allowed to participate financially in such schemes to a minimum extent of 20 per cent. of the share capital.

During the course of the year, the three Provincial Governments, *viz.*, Bombay, the United Provinces and Sind formulated definite schemes as follows :—

(*a*) *Bombay.*—The Bombay Government decided to provincialise Road Transport, the parties to the scheme being the Provincial Government and the Railway, the latter being permitted a financial interest to the extent of 25 per cent., which would amount to approximately Rs. 37½ lakhs. The scheme contemplated a total issued capital of Rs. 4 crores over a period of 3 years.

(*b*) *United Provinces.*—The scheme formulated provided for the formation of a number of tri-partite Joint Stock Companies, the financial interests being shared as follows :—

	Per cent.
Operators	41
Provincial Government	34
Railways	25

The approximate investment which the railways might be called upon to make is estimated to be Rs. 36 lakhs.

(*c*) *Sind.*—The Sind Government's scheme visualised the formation of Joint Stock Companies in which the Sind Government, the railways, the public, and the operators would be permitted to participate in the proportion of 16 : 38 : 8 : 38, respectively. It was the Sind Government's intention to introduce a pilot scheme on the Karachi-Hyderabad route, before attempting co-ordinated development elsewhere. For this scheme, the North Western Railway were to be permitted to subscribe up to 2¼ lakhs on the basis of the agreed 38 per cent shareholding.

In other Provinces no definite schemes were actually formulated, but the question of rail-road co-ordination remained under examination.

The Great Indian Peninsula and the Bengal Nagpur Railways continued to be associated in the two road companies operating in the Central Provinces and Berar, *viz.*, Central Provinces Transport Services Ltd. and Provincial Transport Co. Ltd. The Great Indian Peninsula Railway continued their passenger relief services on certain sections, operated by contractors, the Relief Services Ltd.

The East Indian Howrah-Asansol Goods Road Services closed down finally, and the South Indian Railway progressively reduced their lorry service for the transport of goods and parcels on the Nilgiri Hills as, with an easier rail position, the road service became increasingly less necessary.

The need for the Madras and Southern Mahratta Railway's lorry service between Madras and Bangalore remained and the service was maintained throughout the year under review and worked satisfactorily providing considerable relief to the Railway.

49. Claims for compensation and refunds.—In spite of remedial measures on most railways, the number of compensation claims continued to increase. The factors which contributed to these increases were chiefly :—

(*a*) A further rise in prices and continued scarcity of commodities rendering thefts more profitable.

(*b*) Non-availability of suitable packing material and containers.

(*c*) Inadequate or non-marking of consignments resulting in mis-despatches.

The more important preventive measures adopted included :—

(i) Improved collaboration between the Railway Police, Watch & Ward and other departments in regard to arrangements for safety of packages and goods;

(ii) Watch & Ward re-organisation;

(iii) Strengthening of supervisory staff and staff employed for marking and handling packages;

(iv) Labelling and marking of packages and wagons;

(v) Stricter adherence to instructions requiring damageable packages to be loaded away from wagon doors to prevent pilferage and damage by wet.

Further deterioration in the time taken to settle claims resulted in serious complaints from the public. To minimise such delays, the following measures continued :

(i) Appointment of additional staff in claims offices;

(ii) Appointment of additional line staff to enquire into and verify claims;

(iii) Propaganda amongst staff to avoid delays in correspondence and to ensure the early and correct submission of returns necessary for the settlement of claims;

(iv) A convention between railways which had as its object the minimising of inter-railway correspondence with consequent earlier settlement of claims.

The following statements for Class I Railways show for **1946-47** :—

(A) the number of claims received in respect of goods or parcels damaged or lost and for goods and parcels overcharged and the average time taken in their settlement;

(B) the number and value of claims paid in respect of goods or parcels lost or damaged under main causes;

(C) the number of court cases in respect of goods or parcels lost, damaged or delayed and their disposal.

STATEMENT A.

Item No.	Particulars.	B. A.*	B. N.	B., B. & C. I.	E. I.	G. I. P.	Jodhpur.	M. & S. M.	Mysore State.	N. S.	N. W.*	O. T.	S. I.
1	Number of claims involving compensation for goods or parcels lost, damaged, or delayed carried over as unsettled at the close of the preceding year.	..	10,404	4,606	4,690	22,029	2,000	3,773	5,320	1,913	..	8,384	1,738
2	Number of claims received (and re-opened) for compensation on account of goods or parcels lost, damaged, or delayed during the current year.	..	31,403	28,293	67,014	50,178	6,330	18,879	10,325	6,753	..	20,588	10,048
3	Number of claims referred to in items 1 and 2 settled during the year.	..	30,916	18,670	53,659	42,907	4,788	17,735	12,099	5,536	..	17,779	9,556
4	Balance outstanding as unsettled at the close of the year.	..	10,891	14,229	18,045	29,300	3,544	4,917	3,546	3,130	..	11,193	2,230
5	Net amount paid in compensation. Rs.	..	24,69,031	7,06,181	24,44,131	14,09,628	31,429	4,12,094	76,834	1,04,448	..	3,78,820	3,79,823
6	Percentage sum paid in compensation (item 5) borne to gross earnings.	..	1·65	0·6	1·14	0·72	0·24	0·23	0·41	0·19	..	1·03	0·60
7	Average time taken in settlement of claims shown under items 1 & 2. Days.	..	96	167	32	105	98	81	120	105	..	74	58
8	Number of applications received for refunds on goods and parcels overcharged.	..	11,241	10,405	14,582	12,346	1,341	12,247	1,348	*	..	2,335	18,097
9	Average time taken in settlement of claims shown under item 8. Days.	..	91	86	42	59	77	28	90	*	..	97	49

* Information not available.

STATEMENT B.

Item No.	Particulars.		B. A. *	B. N.	B., B. & C. I.	E. I.	G. I. P.	Jodhpur.	M. & S. M.	Mysore State.	N. S.	N. W. *	O. T.	S. I.
1	Claims paid on account of goods lost.	No.	..	8,491	4,947	15,706	5,748	1,006	4,534	*Nil*	777	..	1,948	1,440
		Value Rs.	..	10,17,416	3,21,212	25,33,165	4,58,702	62,195	4,01,098	*Nil*	1,04,497	..	2,12,180	59,335
2	Claims paid on account of goods stolen.	No.	..	3,597	52	675	1,478	199	39	*Nil*	21	..	3,287	39
		Value Rs.	..	8,27,970	10,508	58,464	78,007	12,251	7,364	*Nil*	4,515	..	4,55,062	26,403
3	Claims paid on account of goods damaged by wet.	No.	..	10	399	96	1,668	5	108	*Nil*	21	..	31	72
		Value Rs.	..	6,764	40,700	9,023	63,204	1,294	10,159	*Nil*	3,225	..	3,457	6,600
4	Claims paid on account of goods damaged by fire.	No.	..	*Nil*	21	*Nil*	9	1	3	*Nil*	1	..	*Nil*	9
		Value Rs.	..	*Nil*	14,525	*Nil*	2,727	55	5,088	*Nil*	570	..	*Nil*	1,202
5	Claims paid on account of goods damaged by breakage.	No.	..	42	41	38	340	3	62	*Nil*	53	..	41	54
		Value Rs.	..	3,106	1,830	3,618	18,725	53	2,322	*Nil*	1,935	..	4,145	789
6	Claims paid on account of parcels and luggage lost and stolen.	No.	..	2,422	1,639	3,634	2,260	244	1,942	*Nil*	181	..	1,166	701
		Value Rs.	..	2,84,775	1,14,335	2,73,849	1,04,389	8,719	1,40,288	*Nil*	10,624	..	1,19,976	26,758
7	Claims paid on account of other causes.	No.	..	1,143	215	498	3,160	56	1,475	2,677	1,420	..	420	1,316
		Value Rs.	..	4,13,647	45,709	77,914	2,54,934	7,370	1,08,291	76,834	53,122	..	63,344	§—7,689

§ The minus figure is due to the amount under 'convention' being disproportionately high to the total amount of claims.

STATEMENT C.

Item No.	Particulars.	B. A. *	B. N.	B., B. & C. I.	E. I.	G. I. P.	Jodhpur.	M. & S.M.	Mysore State.	N. S.	N. W. *	O. T.	S. I.
1	Number of suits filed in court (or pending from the previous year) for the recovery of compensation in respect of goods or parcels lost, damaged or delayed.	..	2,286	1,228	3,614	4,953	100	1,000	293	96	..	1,758	208
2	Number of such suits settled out of court.	..	983	304	737	559	1	282	32	25	..	248	21
3	Number of suits dismissed.	..	185	32	247	9	8	106	35	5	..	80	49
4	Number of suits decreed	..	163	6	387	49	*Nil*	41	7	9	..	68	14
5	Number of suits pending	..	955	886	2,243	4,336	91	571	219	57	..	1,362	124

NOTE.—Information for Bikaner State Railway is not available.

* Information not available.

50. Prevention of Ticketless Travel.—In spite of conditions of overcrowding which render ticket checking on trains extremely difficult, there was an increase in the number of passengers detected travelling without tickets. The number increased to approximately 5 millions as against about 4·6 millions in the year 1945-46. What made the position even more serious was the knowledge that with prevailing conditions of overcrowding, many ticketless passengers were escaping detection altogether.

There was no radical change in the measures adopted for the check and collection of tickets mentioned in the reports for the previous years.

51. Measures taken to prevent blackmarketing of tickets.—Railways introduced various measures during the year to combat the blackmarketing of tickets. These included:—

(i) provision of additional booking office facilities;

(ii) arrangements to regulate the approach of passengers to booking office windows;

(iii) surprise checks by inspecting officials;

(iv) close scrutiny of applications for refunds on unused tickets;

(v) measures for the apprehension and prosecution of persons engaged in blackmarketing of tickets;

(vi) withdrawal by some railways of quota limitations on ticket issues.

CHAPTER V

RAILWAY COLLIERIES

52. Output from principal Railway collieries.—Output from the principal Railway collieries during the year 1946-47 compares with the previous year's output as follows:—

Colliery.	Owned by	Output.						
		1945-46.	1946-47.					
			Total.	Selected A.	Selected B.	Grade I.	Grade II.	Grade III-A.
		Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1. Bhurkunda . .	B. A., E. I., and N. W. Railways.	172,404	167,702	..	..	167,702	..	..
2. Kargali . .	G. I. P. Railway . .	747,018	991,356	..	..	702,495	288,861	..
3. Kurharbaree and Serampore.	E. I. Railway . .	601,155	452,362	386,861	4,526	47,167	9,190	4,618
4. Joint Bokaro .	E. I. and B. N. Railways	1,159,570	1,647,612	..	..	1,647,612	..	..
5. Joint Sawang .	Do.	66,588	59,281	..	..	59,281	..	..
6. Jarangdih . .	B., B. & C. I., and M. & S. M. Railways.	58,369	38,467	..	..	..	38,467	..
7. Talcher . .	M. & S. M. Railway .	194,505	163,108	..	..	..	163,108*	..
8. Kurasia . .	B., B. & C. I. Railway .	350,878	349,744	..	..	349,744*	..	..
9. Argada . .	B. N. Railway . .	154,220	182,290	..	..	182,290	..	..
10. Deulbera . .	Do.	79,076	87,133	..	..	..	87,133*	..
	TOTAL .	3,583,783	4,139,055	386,861	4,526	3,156,291	586,759	4,618

* Probable grade.

The total quantity of coal despatched by Railway collieries during the year under review amounted to 4,052,768 tons of which 3,879,702 tons (or 96 per cent.) were despatched to Railways, representing 35·2 per cent. of the total consumption of railways during the year.

53. Coking coal.—The particulars of the coking coal produced by Railway collieries during the year are given below:—

Colliery.	Grade and Quantity of coal produced.	Quality of coal and where used.
1. Kargali . . .	Grade I—702,495 . .	Inferior coal of high ash content and poor coking proportion. Used entirely for goods service.
	Grade II—288,861 . .	Very inferior coal unsuitable for metallurgical purposes owing to high ash contents. Used for slow goods and shunting services.
2. Giridih (Kurharbaree and Serampore.)	Sel. A—386,861 } Sel. B—4,526 } . .	Best high grade coal, dust of which is manufactured into hard metallurgical coke for use in Railway Foundries and Workshops. Used for mail and express goods services.
	Grade I—47,167 . .	Inferior grade coal which cannot be used for production of metallurgical coke unless blended with other high grade coals or specially treated by washing. Used mainly for goods services.
	Grade II—9,190 } Grade III-A—4,618 } .	Very inferior coals unsuitable for metallurgical purposes owing to their high ash contents. Used for slow goods and shunting services.
3. Joint Bokaro . .	Grade I—1,647,612 . .	Inferior grade coal, dust of which only is suitable for metallurgical purposes. The seam worked as a whole cannot, owing to high ash contents, be used even for blending with high grade coals unless intensive cleaning and washing is resorted to. Used entirely for goods services.
4. Joint Sawang . .	Grade I—59,281 . .	Ditto.
5. Jarangdih . .	Grade II—38,467 . .	Very inferior coal unsuitable for metallurgical purposes. Used for slow goods and passenger services.
6. Argada . . .	Grade I—182,290 . .	Inferior grade coal unsuitable for metallurgical purposes owing to its high ash content. Used for goods and shunting services.

54. Total coal consumed by Railways.

	Tons.
Class I Railways—	
Indian Government Railways	10,345,656
Other Class I Railways	402,697
Class II Railways	215,624
Class III Railways	71,072
TOTAL	11,035,049

55. Coal mined in India.—In 1946 the coal mined in the various provinces of British India amounted to 26,689,747 tons as against 26,255,210 tons in 1945, an increase of 434,537 tons.

56. Coal despatched by Rail.—The quantities of coal carried by the East Indian and Bengal Nagpur Railways were as follows:—

	1945-46.	1946-47.
	Tons.	Tons.
East Indian Railway	15,681,852	14,765,675
Bengal Nagpur Railway	8,616,360	9,424,809
TOTAL	24,298,212	24,190,484

CHAPTER VI

ROLLING STOCK AND MATERIALS

57. Additions to equipment.—During the year orders for the following locomotives and rolling stock were placed for broad and metre gauge Indian Government Railways :—

Items.	*Broad Gauge.*	*Metre Gauge.*
Locomotives	400	58
Coaching Stock	971	385
Goods stock	4,050	*Nil.*

New locomotives and rolling stock actually placed on the line during the year as additions or in replacement were as under :—

Items.	*Broad Gauge.*	*Metre Gauge.*
Locomotives	167	351(*a*)
Coaching Stock	157	47
Goods Stock	14,589	100

(Figures for Coaching and Goods stock are in four-wheeled units.)

57.1. **Engines.**—The average tractive effort per engine (in lbs.) on Class I Railways during the year 1946-47 compared as under with that in the year 1945-46 :—

Average Tractive Effort per Engine (in lbs.).

Type of Locomotives.	Broad Gauge.		Metre Gauge.	
	1945-46.	**1946-47.**	1945-46.	**1946-47.**
1. Steam (including Sentinel and Clayton types)	27,071	**27,115**	15,262	**15,469**
2. Diesel Electric	26,041	**25,888**	..	..
3. Electric	30,515	**30,515**	10,400	**10,400**

NOTE.—For the purpose of the above calculations the figures for the Bengal Assam and North Western Railways as on the 31st March 1946 have been adapted in the absence of returns from those Railways for the year ending 31st March 1947.

58. Manufacture of Boilers and Locomotives in India.—The review of the proposal to remodel the existing Locomotive repair shops at Kanchrapara for locomotive building, a reference to which was made in para. 59 of the last year's Report, was completed in mid-July 1946 when it was finally decided that if locomotives were to be manufactured in India, a separate workshop for this purpose must be provided and the site selected was at Kanchrapara (North). It was further decided that the proposed new locomotive building workshops should be designed for the production of 120 locomotives and 50 additional spare boilers per annum working single shift. An estimate amounting to Rs. 11·40 crores was approved by the Standing Finance Committee for Railways for the provision of the workshop's plant and machinery and the colony for housing the staff. Building work was put in hand immediately and substantial initial progress was made. Indents for machinery and plant were also placed on the Ministry of Industries and Supply.*

During the year under review, the Singhbhum shops of Messrs. Tata Engineering and Locomotive Co., Ltd., were engaged on the manufacture of the first order of 100 SGS class boilers. Due to various initial difficulties, the firm was not able to work to the production schedule laid down in the Agreement.

Ajmer workshops continued to work on the second batch of 10 XT/1 locomotives. A further order for 58 YB locomotives, boilers for which will be manufactured by the Singhbhum workshops, was placed on these shops.

59. Rationalization of manufacturing capacity in Railway Workshops.—During the period under review, twenty-one meetings of the various Rationalization Committee Groups were held. Apart from making

* It has since been decided to change the location of the workshops to Mihijam (E. I. Rly.).
(*a*) 351 MAWDs purchased from the Disposals Directorate on 16th May 1946.

arrangements to meet their urgent requirements of components in short supply, the Rationalization Groups also devoted attention to selecting items and preparing part drawings for bulk manufacture.

60. War Branch.—The War Branch in the Railway Board's Mechanical Directorate dealt during the year with all matters relating to the reconversion of rolling stock lent to the War (now Defence) Department for use in India and overseas; arrangements for the supply of locomotives and rolling stock to Siam and Burma; periodical overhaul, maintenance and complaints regarding Block Rakes and Military Specials, distribution to Railways of electric equipment received from the United Kingdom in connection with the construction of Special Military Cars, etc.

61. Rolling Stock and Ambulance Trains.—The work of construction of ambulance trains and Special Military Cars having been stopped due to cessation of hostilities, the materials and semi-converted coaches were returned to the owning railways. Except for one broad gauge ambulance train, all the broad gauge and metre gauge ambulance trains were also returned to railways for reconversion of stock for civilian use.

62. Air-conditioning of Coaching Stock.—On release by the War (now Defence) Department, broad gauge and metre gauge air-conditioned ward cars are being converted into air-conditioned coaches for civilian traffic.

63. Supply of Rails and Fishplates from Indigenous Sources.—The restriction in supplies of steel referred to in last year's Report continued during the year under review and orders could be placed only upto the limit authorised by the Iron and Steel Controller. The tonnage of rails ordered by all Railways from the two steel companies (*viz.*, Messrs. The Tata Iron and Steel Company, Limited, and the Steel Corporation of Bengal, Limited) for supply in 1946-47 amounted to 135,503 tons and the tonnage of fishplates ordered from Messrs. Tatas (SCOB do not roll fishplates) amounted to 7,025 tons. The actual quantity supplied against these orders in the year ending 31st March 1947, however, amounted to 69,208 tons of rails and 2,370 tons of fishplates only.

64. Wooden sleeper purchase organisation.—The total value of timber and wooden sleepers purchased by Class I Railways (excluding Bengal Assam, North Western, Bikaner, Jodhpur, Mysore and His Exalted Highness the Nizam's State Railways) during 1946-47 was as follows:—

	(In thousands of rupees.)
Timber	4,931
Sleepers	9,905

The relative position of various kinds of sleepers can be seen from the following percentages based on total number of sleepers in the track of Class I Railways (excluding North Western and Bengal Assam Railways):—

—	Wood.	Cast Iron.	Steel.	Others.
Broad Gauge	22·5	54·0	22·6	0·9
Metre Gauge	64·0	6·0	30·0	—

The wooden sleeper track mileage of broad and metre gauges on Class I Railways (excluding North Western and Bengal Assam Railways) as on 31st March 1947 was as follows:—

Broad Gauge	5,073·679 miles.
Meter Gauge	8,672·533 ,,
TOTAL .	13,746·212 ,,

No wooden sleepers were imported for use by Indian Railways. The average price of 1st class *Sal* sleepers in the Eastern Group was as follows:—

	Rs.	A.	P.
Broad Gauge	9	11	6
Metre Gauge	4	7	3

At Dhilwan, on the North Western Railway, 426,431 broad gauge sleepers of coniferous species were treated with a mixture of 40 per cent. creosote and 60 per cent. fuel oil during 1946-47. Besides, a number of sleeper ends, poles and other timber equal to 12,052 broad gauge sleepers were also treated during the same period.

The details are given below:—

—	Fir.	Chir.	Kail.	Deodar.	Total.
1. No. of sleepers treated	147,119	165,680	38,036	75,596	426,431
2. Average absorption of mixture per sleeper.	lbs. 15·2	lbs. 14·95	lbs. 15·8	lbs. 10·25	
3. Cost of treatment per sleeper . .	Rs. 1-11-2	Rs. 2-8-6	Rs. 1-11-2	Rs. 1-6-8	

At Naharkatiya Treating Plant in Assam, 35,296 broad gauge and 143,614 metre gauge sleepers of various species like Hollong, Hollock, Jutli, Sam and Makai were treated during the year. The cost of treatment per sleeper was Rs. 2-14 per broad gauge and Rs. 1-6 per metre gauge.

65. Value of Railway materials purchased.—The Pakistan Railway authorities not having furnished the necessary data in respect of the Bengal Assam and the North Western Railways up to the time the Report was sent for printing, the comparison has to be made excluding the aforesaid railways. The value of stores purchased by Indian Government Railways excluding the Bengal Assam and the North Western Railways, increased from Rs. 57·87 crores in 1945-46 to Rs. 67·82 crores in 1946-47. The value of "indigenous materials" purchased went up by Rs. 11,29 lakhs while that of "imported materials" decreased by Rs. 1,34 lakhs. The overall increase was particularly heavy under miscellaneous stores grouped in the statement below as "all other stores" (Rs. 8,05 lakhs), "stores hardware, copper, tin, etc." (Rs. 92 lakhs) and "rolling stock" (Rs. 91 lakhs). A summary of the value of the stores purchased is given below. The detailed figures are given in Appendix "A", pages 240-243 of Volume II of this Report:—

Particulars.	Value of imported materials (in lakhs).			Value of indigenous materials (in lakhs).	Total purchases (in lakhs).	
	Purchased direct.	Purchased through agents in India.	Total imported materials.		**1946–47**	1945–46
	Rs.	Rs.	Rs.	Rs.	**Rs.**	Rs.
A.—Bridge work and its parts, fittings and special fastenings . .	..	..	..	2	**2**	3
B.—Engineering plant and components including all hand and power machinery	1	3	4	4	**8**	9
C.—Workshop machinery, plant and equipment including pneumatic machinery and tools . . .	25	30	55	13	**68**	45
D.—Permanent-way material and track tools	21	8	29	4,23	**4,52**	4,63
E.—Rolling Stock	1,22	6,05	7,27	5,65	**12,92**	12,01
F.—Building materials, water mains, sewage system and track and yard enclosing material and signal and interlocking materials, etc.	1	12	13	65	**78**	80
G.—Stores hardware, copper, tin and zincware, all leather, canvas and india-rubber in bulk, metals, painters' stores, timber and fuel and fuel oil, etc. . . .	5	65	70	11,53	**12,23**	11,31
H.—Electrical and train and locomotive lighting plants and materials, etc., and telegraph and telephone equipment	15	50	65	19	**84**	85
All other stores	17	1,09	1,26	34,49	**35,75**	27,70
Total . .	2,07	8,82	10,89	56,93	**67,82**	57,87

66. In-take of Indigenous Goods.—The comparative figures for total purchases for the year 1945-46 and 1946-47 in respect of all Indian Government Railways (excluding Bengal Assam and North Western) are given below. This includes purchases made through the Industries and Supply Department and other Government agencies and purchases of foodgrains for Railway grain shops.

Year.	Total value of purchases (in lakhs of rupees).				
	Stores imported direct.	Imported Stores purchased in India.	Stores of Indian manufacture or indigenous origin.	Total value of Imported and Indigenous Stores.	Percentage of Col. 4 to Col. 5.
(1)	(2)	(3)	(4)	(5)	(6)
1945–46	2,00·42	10,23·03	45,63·86	57,87·31	79·0
1946–47	**2,07·41**	**8,81·62**	**56,92·64**	**67,81·67**	**84·0**

67. Value of Stores purchased through the Industry and Supply Department.—The comparative figures for 1945-46 and 1946-47 are given below :—

(In lakhs of rupees.)

Year.	Total value of stores purchased.	Value of stores purchased through the Industry & Supply Department.	
		Amount.	Percentage of Col. 3 to Col. 2.
(1)	(2)	(3)	(4)
1945–46	57,87·31	5,46·80	9·4
1946–47	**67,81·67**	**4,03·14**	**5·9**

NOTE.—The figures are exclusive of transactions pertaining to North Western and Bengal Assam Railways.

68. Value of Stores purchases controlled by the Railway Board.—As in previous years, the Railway Board continued to purchase rails, sleepers (steel, cast iron and wood) and wagons for all Indian Government Railways. Figures for 1945-46 and 1946-47 in respect of purchases made by the Railway Board of these items are given below :—

(In lakhs of rupees.)

Year.	Total value of stores purchased.	Value of stores purchases controlled by the Railway Board.	
		Amount.	Percentage of the total value of stores purchased.
(1)	(2)	(3)	(4)
1945–46	57,87·31	10,76·99	18·6
1946–47	**67,81·67**	**11,65·73**	**17·2**

NOTE.—The figures are exclusive of transactions pertaining to North Western and Bengal Assam Railways.

69. Value of Lease/Lend purchases controlled by the Railway Board.—The total debits raised by the Deputy Accountant General, Ministry of Industry and Supply, New Delhi, against Railways in the year 1946-47 for cash and Lease/Lend purchases in America, controlled by the Railway Board, amounted to about Rs. –1,88,42,606 and Rs. –15,260, respectively.

NOTE.—The minus debits were due to the following :—

(1) Due to revision of ocean freight in respect of certain Disposal Orders, the East Indian Railway was debited with Rs. –1,41,860.

(2) On account of the refund of cost, etc., of Locomotives which was adjusted in the accounts for the year 1946-47. This resulted in a minus debit of Rs. 2,14,96,600-3 against the East Indian Railway.

(3) On account of the write-back in 1946-47 of the debit adjusted against Jodhpur Railway during 1945-46. This resulted in a minus debit of Rs. 1,095-6 against that Railway.

70. Direct purchases by Railways.—The value of direct purchases made by Railways (excluding Bengal Assam and North Western) during 1946-47 amounted to 52,13 lakhs, as compared with 41,64 lakhs during 1945-46.

71. Stores balances.—The statement below compares the total stores balances at the end of 1946-47 with those at the end of 1945-46 :—

(In lakhs of rupees.)

Year.	B. A.	B. N.	B., B. & C. I.	E. I.	G. I. P.	M. & S. M.	N. W. Commercial.	N. W. Strategic.	O. T.	S. I.	Other Rlys.	Total.
1945-46	4,89	3,39	2,32	4,01	4,76	98	3,40	28	70	1,52	71	26,96
1946-47	5,38	3,60	2,54	4,74	5,23	1,60	3,29	26	90	1,36	81	29,71

72. Timber supply situation.—The timber supply situation on Class I Railways (except Mysore State Railway) continued to be satisfactory throughout the year as will be seen from the figures given below :—

(Figures in tons.)

Year.	Quantity demanded by the Railways.	Quantity allocated to the Railways.	Quantity actually received by Railways.
II Quarter of 1946	15,000	14,718	15,501
III Quarter of 1946	15,000	14,718	10,391
IV Quarter of 1946	15,000	14,718	11,970
I Quarter of 1947	14,888	14,888	13,030
TOTAL	59,888	59,042	50,892

At the end of the year the working stocks of Class I Railways (except Mysore State Railway) totalled 34,493 tons.

73. Supply situation of vital stores or components of first importance.

Indigenous stores.—The general supply position of the indigenous stores has remained satisfactory during the year under review.

Imported stores.—The general supply position of the imported stores *ex*-United Kingdom improved during the year under review but owing to the shortage of certain raw materials and labour troubles in that country the position did not improve to the extent it was expected.

The following were the main items of stores that were outstanding at the end of 1946-47 against the Controller of Imported Railway Stores' 1944, 1945 and 1946 indents :—

No.	1944 indents.	1945 indents.	1946 indents.
1	Connecting and Coupling rods.	....	....
2	Boilers.	Boilers.	Boilers.
3	Chains.	Chains.	Chains.
4	....	....	Copper Boiler plates.
5	....	Boiler tubes.	Boiler tubes.
6	....	Wheels, Axles & Tyres.	Wheels, Axles & Tyres.
7	....	Electric Loco. Spares.	....
8	....	Spare parts for Lentz gear.	Spare parts for Lentz gear.
9	....	Lenses.	Lenses.
10	....	Pumps.	Pumps.
11	....	....	Electric Lamps.
12	....	....	Loco. Spares.

The main items of importance on order from United States of America were North American Locomotive spares, the supply position of which has not been so satisfactory during the year under review as anticipated. Owing to the shortage of general equipment, the contractors could not adhere to the delivery periods scheduled in the purchase orders. The position regarding supply of other items has, however, been better.

The supply position of stores *ex*-Australia has also not been satisfactory. The outstanding orders for 1945 which were mainly for boiler tubes could not be completed by that country during the year under review.

74. Situation regarding theft of Railway Property.—During the year under review only two reports of thefts of stores and valuable materials from Stores Depôts were received. Necessary measures have been taken to remedy the defects which enabled the thefts to be committed.

75. Water Softening Committee.—During the year under review the installation of the necessary number of water softening and treatment plants, as recommended in the scheme was completed on the Lahore-Karachi Section of North Western and Calcutta-Waltair Section of Bengal Nagpur Railways. All these plants are operating. A number of similar plants were also installed on the Great Indian Peninsula and Bombay, Baroda and Central India Railways. The work of installing the remaining plants on these two Railways as well as on Madras and Southern Mahratta Railways is in progress.

Central Standards Office for Railways.

76. Civil Engineering Branch.—During the year under review, the more important drawing and design work undertaken included :—

Track—

(1) 1 in 16 high speed turn-outs with curved switch MG. 60 lb. R rail on steel sleepers.

(2) 1 in 16 symmetrical splits B.G. 90 lb. R rail on steel sleepers.

(3) 1 in $8\frac{1}{2}$ and 1 in 12 turn-outs M.G. 60 lb. R rail on steel sleepers.

(4) 1 in 12 and 1 in $8\frac{1}{2}$ turn-outs N.G. 50 lb. R rail on wooden sleepers.

(5) Stretcher bars for 1 in $8\frac{1}{2}$ double slips M.G., flat footed rail.

(6) Dogspike for N.G. track.

(7) Section of R.S. turn-out sleeper for M.G.

(8) Rail profile instrument for measuring wear of 90 lb. R rail and supply of the instrument to railways for trial purposes.

Bridge—

(9) Common deck bridge—rail expansion joint and flooring.

(10) High tensile steel plate girder spans B.G. and M.G. for 10′ 12′, 15′, 20′, 30′ and 40′ suitable for wooden sleepers.

(11) Mild steel welded plate girder spans B.G. and M.G. for 10′, 12′, 15′, 20′, 30′ and 40′ suitable for wooden sleepers.

(12) 20′ overall joist span with isolated steel sleepers.

(13) 20′ overall joist span with trough flooring.

(14) Pier and abutment for 20′ overall joist span with isolated steel sleepers and trough flooring.

(15) Mild steel welded plate girder spans for 40′ and 60′ B.G. specially designed for Bombay, Baroda and Central India Railway.

Signalling and Interlocking—

(16) Counterweight lever brackets.

(17) Double wire diversion wheels.

(18) Roller paths for inside lock-bar.

General—

(19) Preparation of diagrams showing maximum infringements of the post-war standard tanks when loaded on B.G. well wagons.

(20) Preparation of statements for Callender—Hamilton material for railways and provinces.

(21) Issue of a revised edition of the Steel Bridge Code and a number of correction slips to the Pier and Abutment, Reinforced Concrete, Steel Structures and Welding Codes and Bridge Rules.

(22) Goods shed 30′ span riveted, revised in accordance with the Indian Railways Conference Association's recommendations.

77. **Mechanical Engineering Branch.**—During the year under review, the more important drawing and design work undertaken included :—

(*a*) *Carriage and Wagon—*

(i) Proposed light weight all steel stressed skin shell B.G. 11′-8″ wide for coaching stock.

(ii) Proposed layouts for the new 11′-8″ light weight B.G. shell.

(iii) Proposed light weight bogie for post-war light weight coaching stock B.G. 11′-8″ wide.

(iv) Bolster type bogie for N.G. coaching stock.

(v) Head stock stiffeners and diagonals for carriage underframes and wagons more suitable to withstand and absorb the energy input from buffing impacts.

(vi) Revised designs of oil and petrol tank wagons B.G. and M.G.

(vii) Modification to domes of petrol tanks to include a diaphragm with inlet pipe control valve and vapour extractor.

(viii) Modification to draft gear and brake gear of American built M.G. wagons.

(*b*) *Locomotive—*

(i) Modifications to I.R.S., B.G. (WL and Pacific type locomotive) bogies and damping devices and details to remedy defects noticed on the basis of test results.

(ii) Arrangements and details of Helical Spring control bogie for XS class locomotives to accord with the Pacific Locomotive Committee's recommendations.

(iii) Modification to XP class locomotive bogie control arrangement from laminated spring control to Helical Spring Control on the basis of test results.

(iv) Strengthening of XA, XB and XC class locomotives to overcome the frequent failures of frames over trailing bogie and leading coupled horn openings.

(v) Modification to hind truck bearing spring arrangement for the XP and WL class locomotive with a view to remedying the canting of hind truck springs, uneven wear of slide liners and the consequent danger of track distortions, due to unsuitable lateral controls.

General—

Imported Locomotives and Wagons.—The index of modifications required to be carried out to the imported locomotives and wagons *ex*-United States of America and Canada has been maintained up-to-date.

Inspection of Boilers at Telco. Works, Tatanagar.—Consequent upon the orders placed on Messrs. The Tata Engineering and Locomotive Company, Limited, Telco. Works, Tatanagar, for boilers, an Inspector of Railways has been appointed to carry out inspection at the Works on behalf of Railways. Any questions which arise in regard to the interpretation of or modification to the particular specification or drawings are referred to the Central Standards Office by this officer.

78. Specifications Branch.

Specifications.—The normal work of this Branch in keeping Indian Railway Standard Specifications up-to-date continued throughout the year. During the year under review, no new Indian Railway Standard Specifications were issued. Twenty-four Indian Railway Standard Specifications were, however, completely revised and re-issued.

Four new Indian Stores Department Specifications were adopted for use on Railways and one War Emergency Revision Slip to Indian Railway Standard Specification was withdrawn.

The following particular specifications for Broad Gauge and Metre Gauge Indian Railway Standard stock were prepared and orders were placed in India :—

(i) Indian Railway Standard 4-wheel carriage underframes for 1947-48 programme.

(ii) "TO" type of tank wagon against Railway Board's call for 1947-48.

Specifications are regularly received from Standards Institutions of Britain, Australia, New Zealand, and the American Society for Testing Materials in the United States of America. These specifications are reviewed, brought to the notice of Railways, or recorded for reference purposes.

The paint exposure tests have been concluded and a comprehensive report on these is under compilation giving history, results, conclusions and recommendations. This report will be circulated early in 1947-48.

The final report on the steel corrosion tests has been received from the Government Test House, Alipore, Calcutta. A report on the history and results of these tests was circulated to Railways during the year.

Reclamation Bulletin.—Reclamation Bulletin No. 2 was issued during the year under review.

Boiler welding code of practice.—This code has undergone a complete revision, as a result of circulation to Railways, Consulting Engineers, and Welding Institutions and it is hoped to issue the final code during 1947-48.

Library.—The Mechanical and Metallurgical side of the Central Standards Office Library, which was previously maintained in Simla, was brought to Delhi. The Engineering side of this library will continue to remain in Simla. This change has enabled Mechanical Officers in Delhi to make more use of the information available and has saved considerable delay in obtaining data.

The existing Technical Index is being revised with the object of providing a more complete information bureau.

The two libraries contain over 1,100 books and about 600 catalogues. During the year 100 new books have been added to the library.

This office is a member of the following Institutions and now regularly receives their publications which are circulated and used for reference purposes :—

1. Association of American Railroads.
2. American Society for Testing Materials.
3. Institution of Welding—as Industrial Corporate Member, Class II.
4. British Cast Iron Research Association.
5. British Non-ferrous Metals Research Association.

Journals from the following Institutions/Firms are also being obtained regularly :—

1. " Welding " from Messrs. The Louis Cassier Company, Limited.
2. " Transactions of American Society of Mechanical Engineers."
3. " Mechanical Engineering " from A.S.M.E.
4. " The Engineer " from its proprietors.
5. " Journal of Scientific and Industrial Research " from the Council of Scientific and Industrial Research.
6. " Transactions of Institution of Engineers (Australia)."
7. " Journal of the Institution of Locomotive Engineers."
8. " Journal of the Institution of Civil Engineers."
9. " Literature of the Society of Experimental Stress Analysis."
10. " Journal and Proceedings of the Institute of Mechanical Engineers " from that Institute.
11. " Locomotive " from its publishers.
12. " Nature " (scientific) from its publishers.
13. " Iron and Steel " from its publishers.
14. " Monthly Bulletins of the International Railway Congress Association " from that Association through Railway Board, (India).

Items 6, 9, 11, 12, 13 and 14 were added to the list during the year.

The card index record of trials and patents watch has been maintained throughout the year.

79. Standardization Committees.—The Bridge, Track and Signalling and Interlocking Standards Committees met once during the year under review.

Locomotive Standards Committee.—The Locomotive Standards Committee met during the year and dealt with points which had arisen in the period under review on the different features relating to locomotive designs and fittings. Recommendations were made on the following subjects :—

1. Investigation regarding the improvements in design of fire-grates.
2. Exhaust steam injector.
3. Possibility regarding the manufacture of Bar frames for future locomotives.
4. Investigation regarding the comparative efficiency of the most modern Caprotti valve gear and long travel Walschaerts valve gear for new BESA & WP locomotives.
5. Stream-lined piston valves.
6. Designs of piston heads for diameters of 18″ and above and below.
7. Suitability of crossheads manufactured from cast steel.
8. Design of gudgeon pin which can be inserted and withdrawn from the outer side of the crosshead.
9. Design of reversing shaft of welded construction.
10. Performance of manganese steel liners fitted in rubbing contact in axle boxes channels and on guide faces.

11. Modification to hind truck bearing spring arrangement for XP and WL class locomotives.
12. Consideration of a modified designs of intermediate draw gear for Metre Gauge Locomotives.
13. Speed indicators.
14. Finalization of the particular specification for the prototype "WP" class 4-6-2 type B.G. locomotives.

Results of trials of experimental fittings were considered and fifteen trials were closed. In six instances fittings that had been under trial were considered satisfactory and out of these five were adopted as standard.

Carriage and Wagon Standards Committee.—The Carriage and Wagon Standards Committee met during the year and recommendations were made on the following subjects:—

1. Investigation into the possibility of use of plywood for internal panelling and furnishing of railway coaching stock.
2. Improvements in designs of Indian Railway Standards fittings found to be responsible for heavy maintenance.
3. Improved design of windows for railway carriages.
4. Specification for leather cloth for upholstery and internal furnishing of railway coaching stock.
5. Improvements in the design of tank wagons.
6. Decision regarding the abandonment of past policy which was to provide automatic centre buffer couplers on all Broad Gauge coaching and goods stock at some future date.
7. Improvements in the existing design and equipment of "BVG" brake vans.
8. Design of weather-proof doors for wagons.
9. Design regarding the provision of metal pockets for way-bills on inside of doors of covered wagons.
10. Investigation regarding the improvements in the design of wagon label holders.
11. Investigation regarding maximum collision speeds of Broad and Metre Gauge coaching and goods stock for purposes of collision tests to be carried out by the Research Branch of Central Standard Office.

The *Electrical Standards Committee* and the *Standing Committee on Standards and Specifications* for Indian Railways did not meet during the year under review.

80. Research and Development Branch.

(*a*) *Mechanical Section*—

Lateral control of Indian Railway Standards "Pacific" Type locomotives.—The Consulting Engineers' detailed drawings for Hind Truck Spring Control Gear for XB, XC, and XS class locomotives have been approved.

The Pacific Locomotive Committee recommended that oscillation trials should be carried out with each new class of locomotives introduced. During the last decade, although many oscillation trials have been made on locomotives of widely varying type on Broad Gauge and Metre Gauge, it has not yet been possible to measure the driving forces which set up oscillation of locomotives on Indian Railways. Measurements of rapidly fluctuating loads and stresses can now be readily and accurately made by means of electric resistance gauges, developed largely in United States of America during recent years and which are now available at low cost.

Longitudinal weighbars specially designed to suit the WL locomotive and incorporating the latest pattern of electric resistance gauges are now being manufactured for fitting to a WL locomotive in such a way that when used in conjunction with the usual transverse weighbars the magnitude and direction of the resultant horizontal forces between engine and track will be recorded.

From these experiments it is hoped to deduce certain fundamental constants which will enable the locomotive designer to predetermine values of lateral control necessary for new locomotive types.

General.—Outline designs for an 18-ton axle load pacific locomotive (the WP) were completed and a specification was drawn up for a pilot order of 16 such locomotives which were required early for test purposes before designs are finalised for bulk purchase.

The Mechanical Research Section was also engaged in estimating suitable speed schedules for the mail and express services of the Broad Gauge railways in relation to a standard train consisting of 10 fully loaded 11′-8″ wide light weight bogie coaches hauled by a WP locomotive utilising a moderate grade Indian non-coking coal.

As railways may in future be denied the use of " metallurgical coals ", research was directed principally to the determination of the optimum design of grate for use with Indian non-coking coals. Dynamometer tests were conducted during the period under review on AWE locomotives. A further series of tests on N.M. Garrat locomotives hand-fired, XE1 locomotives hand-fired and stoker fired, and HGC type locomotives hand-fired has been projected but final conclusions are not expected to be available before the end of the following year.

Tests were undertaken to determine the delivery of Indian Railway Standard injectors and to compare their performance with proprietary injectors. As a result of these tests certain initial proposals have been formulated for modifying the design of Indian Railway Standard injectors for further trials.

Trials on shovels initiated in the previous year were completed during the period under review and recommendations on standardization have been offered for consideration by the Locomotive Standards Committee.

The trial reports on the Great Indian Peninsula modernised BESA 4-6-0 locomotive (411 D/4M) were put into final form and were submitted for duplication and circulation.

Contact has been made with the Consulting Engineers, The Locomotive Development Board of the Bituminous Coal Research Committee, United States of America, Brown Boverie, Switzerland, and the Locomotive Manufacturers' Association, and data collected on the gas turbine locomotive as a form of power which should be suitable for future Indian requirements.

On the basis of earlier research on valve gear, the mechanical research section drew up certain tentative proposals for eventual standardization. A brief outline specification was prepared for discussion by all Chief Mechanical Engineers and a questionnaire was addressed to manufacturers of certain well-known proprietary valve gears, principally for estimating purposes.

(*b*) *Civil Section.*—Tests of a new design of 3rd class coach including riding tests and impact tests to destruction were completed. Strength tests were made on a Metre Gauge " WD " box car of United States of America design in connection with the replacement of the wooden bodies by a new steel design.

The wagon test plant at Shakurbasti was further developed. Equipment of the machine and fitting shop and electrical laboratory was taken in hand.

Soil Mechanics Laboratory.—Action was taken to purchase equipment scheduled in a list furnished by the Director, Scientific and Industrial Research to cope with routine analysis of soils and for making soil pressure measurements under dynamic loads.

(*c*) *Metallurgical and Chemical Section.*—The Central Standards Office has circulated a pamphlet describing the methods of testing moulding sands to help Indian Railways carry out necessary investigation. The British Cast Iron Research Association and American Foundrymen's Association apparatus, the purchase of which was recommended to railways by Metallurgists and Chemists Sub-Committee of Indian Railway Conference Association for conducting investigation on moulding sands, was not available and no progress therefore was possible in this respect during the year under review.

Research on jointing composition was continued.

Research on the following subjects was initiated during the course of the year :—

(*a*) determination of composition of an alloy suitable for fusible plugs of locomotive fire-boxes, and

(*b*) wear properties of non-ferrous metals.

The Central Standards Office has joined the British Non-Ferrous Metals Research Association as a subscribing member on behalf of the Indian Railways, and will take advantage of the services of the Association in respect of railway problems concerning non-ferrous metals. The Membership of the British Cast Iron Research Association was continued.

In view of the arrears of maintenance work orders in railway workshops and the fact that the field for introduction of sprayed metal bearings in railway practice is extremely limited, the Indian Railway Conference Association decided that this research be not undertaken for the present. The Council of Scientific and Industrial Research were informed accordingly.

The Central Standards Office was represented as usual on the Metallurgists and Chemists Sub-Committee of the Indian Railway Conference Association.

CHAPTER VII

STAFF

81. Number of Staff.—The total number of employees (permanent and temporary) on all Indian Railways and in the office of the Railway Board and other offices subordinate thereto (excluding staff employed on construction) at the end of the year 1946-47 was 1,046,843 as compared with 990,863 at the end of 1945-46. The total route mileage at the end of the year was 40,524.

82. Cost of Staff.—The following statement shows the number and cost of all staff, gazetted and non-gazetted, permanent and temporary, open line and construction, employed on Class I Railways during the years 1945-46 and 1946-47. Contractors' labour is not included :—

Railway System.	Year.	NUMBER OF STAFF ON 31ST MARCH. — OPEN LINE. Gazetted Officers.	Non-gazetted employees.	TOTAL.	CONSTRUCTION. Gazetted Officers.	Non-gazetted employees.	TOTAL.	Gazetted Officers on loan from the Indian Audit and Accounts Service.	† COST OF STAFF DURING THE YEAR ENDING 31ST MARCH. Gazetted Officers.	Non-gazetted employees.	TOTAL.	Total including staff on loan from the Indian Audit and Accounts Service.
1	2	3	4	5	6	7	8	9	10	11	12	13
									Rs.	Rs.	Rs.	Rs.
Bengal Assam	1946	199	140,760	140,959	..	..	..	..	45,85,731	8,17,95,462	8,63,81,193	8,63,81,193
	1947	**199**	**140,760**	**140,959**	..	..	..	..	**45,85,731**	**8,17,95,462**	**8,63,81,193**	**8,63,81,193**
Bikaner State	1946	19	5,058	5,077	...	..	..	..	1,81,920	18,01,680	19,83,600	19,83,600
	1947	**19**	**5,504**	**5,523**	..	..	..	..	**1,78,020**	**19,10,856**	**20,88,876**	**20,88,876**
Bengal Nagpur	1946	211	93,884*	94,095*	10	360	370	..	37,93,713	6,24,86,398	6,62,80,111	6,62,80,111
	1947	**198**	**100,597**	**100,795**	**10**	**492**	**502**	..	**39,02,593**	**7,45,57,016**	**7,84,59,609**	**7,84,59,609**
Bombay, Baroda and Central India	1946	180	81,664	81,844	..	1	1	..	35,17,211	6,24,78,929	6,59,96,140	6,59,96,140
	1947	**172**	**86,043**	**86,215**	..	**1**	**1**	..	**36,28,757**	**7,15,61,491**	**7,51,90,248**	**7,51,90,248**
East Indian	1946	278	164,789*	165,067*	20	6,354	6,374	2	64,26,002	10,71,35,105	11,35,61,107	11,36,16,463
	1947	**278**	**184,141**	**184,419**	**22**	**4,855**	**4,877**	**1**	**72,86,092**	**11,77,90,268**	**12,50,76,360**	**12,51,07,036**
Great Indian Peninsula.	1946	215	146,508	146,723	..	..	..	..	50,26,146	8,31,99,855	8,82,26,001	8,82,26,001
	1947	**253**	**153,854**	**154,107**	..	..	..	**2**	**52,89,015**	**9,38,27,523**	**9,91,16,538**	**9,91,24,950**
Jodhpur	1946	46	8,945	8,991	..	..	..	1	4,55,959	51,77,627	56,33,586	56,58,294
	1947	**47**	**9,444**	**9,491**	..	..	..	**1**	**5,48,166**	**66,96,124**	**72,44,290**	**72,81 207**
Madras and Southern Mahratta.	1946	169	65,268	65,437	..	..	..	..	30,91,728	4,05,80,124	4,36,71,852	4,36,71.852
	1947	**163**	**72,826**	**72,989**	..	..	..	..	**32,43,411**	**4,54,87,209**	**4,87,30,620**	**4,87,30,620**
Mysore State	1946	44	8,611	8,655	1	3	4	..	2,52,484	32,41,848	34,94,332	34,94,332
	1947	**46**	**9,084**	**9,130**	**1**	**3**	**4**	..	**2,55,496**	**40,22,746**	**42.78,242**	**42,78,242**
Nizam's State	1946	75	17,037	17,112	3	286	289	..	10,88,278	1,00,43,196	1,11,31,474	1,11,31,474
	1947	**79**	**17,494**	**17,573**	**3**	**168**	**171**	..	**11,68,109**	**1,28,91,040**	**1,40,59,149**	**1,40,59,149**
North Western	1946	238	134,117	134,355	14	379	393	3	48,58,566	9,36,77,041	9,85,35,607	9,86,04,060
	1947	**238**	**134,117**	**134,355**	**14**	**379**	**393**	**3**	**48,58,566**	**9,36,77,041**	**9,85,35,607**	**9,86,04,060**
Oudh Tirhut	1946	112	41,556	41,668	..	..	..	..	13,43,230	1,91,83,763	2,05,26,993	2,05,26,993
	1947	**121**	**45,692**	**45,813**	..	..	..	..	**15,56,452**	**2,32,88,563**	**2,48,45,015**	**2,48,45,015**
South Indian	1946	147	48,442	48,589	..	..	..	..	22,58,858	2,99,99,939	3,22,58,797	3,22,58,797
	1947	**151**	**52,852**	**53,003**	..	..	..	..	**24,22,799**	**3,53,56,951**	**3,77,79,750**	**3,77,79,750**
Railway Clearing Accounts Office	1946	5	2,308	2,313	..	..	..	2	69,099	29,44,171	30,13,270	30,54,633
	1947	**5**	**2,188**	**2,193**	..	..	..	**2**	**86,672**	**30,96,702**	**31,83,374**	**32,29,501**
TOTAL	1946	1,938	958,947*	960,885*	48	7,383	7,431	8	3,69,48,925	60,37,45,138	64,06,94,063	64,08,83,943
	1947	**1,969**	**1,014,596**	**1,016,565**	**50**	**5,898**	**5,948**	**9**	**3,90,09,879**	**66,59,58,992**	**70,49,68,871**	**70,51,59 456**

* Represents revised figures for 1945-46 due to changes made by the Railway Administrations in the figures published last year.

† The figures of cost represent pay, allowances, passages, provident fund contribution and gratuity.

A comparison of the figures for 1946-47 with those for the previous year shows that the total number of staff employed on the open line of Indian Government Railways increased by 53,799 during the year, while the number of construction staff decreased by 1,365.

The total cost of staff including that of staff on loan from the Indian Audit and Accounts service increased by Rs. 5,88,35,739 during the year. Increases were recorded both in the numbers and cost of staff on Indian Government Railways [see Appendix A, Graph No. (ix)]. The general increase in numbers was due to employment of additional staff to cope with the increased volume of work and on certain items of the post-war programmes. The rise in cost, apart from that resulting from the increase in staff, was due mainly to the payment of arrears of dearness allowance to the staff concerned at enhanced rates for the period 1st July 1944 to 31st December 1944, and to the grant of interim relief to all railway servants drawing pay of Rs. 250 and below.

83. Direct recruitment to the Superior Services.—52 appointments were made to the Superior Railway Services by direct recruitment. Details are given below :—

Departments	*Total*
Engineering	25
Accounts	1
Transportation (Traffic) & Commercial	26
Transportation (Power) & Mechanical Engineering	—
Other Departments	—
Total	52

84. Promotions.

(*a*) *Superior Services.*—For the year 1946-47, 19 vacancies in the Superior Services were earmarked for promotion from Class II and Class III services but the selection for filling up the vacancies could not be completed during the year under review. One Specialist post in the Superior Service was, however, filled up by promotion of a subordinate during the year.

(*b*) *Lower Gazetted Service.*—Twenty-two promotions were made to the Lower Gazetted Service in the various Departments.

85. Railways and Labour.—(*a*) *Demand from staff for improvement of service conditions—appointment of Adjudicator and the Central Pay Commission.*—It was but natural that the large body of Railwaymen who had worked loyally in furtherance of the war effort, should have felt that their economic troubles would come to an end with the end of the War. Due to various factors, this expectation was belied. They furthermore viewed with apprehension the possibility of retrenchment due to possible reduction in railway activities and the absorption of *ex*-servicemen. Thus, towards the close of the year 1945-46, a number of communications were received by Government from the All-India Railwaymen's Federation presenting various demands and asking for adjudication on a constantly enlarging field. Having carefully reviewed these demands, Government appointed in April 1946 Mr. Justice Rajadhyaksha to adjudicate on the following points :—

(1) Whether the existing hours of work of Railway servants, other than those to whom the Factories Act, 1934, applies, should be reduced and if so, to what extent and to what classes of Railway servants; if reduced, the date or dates by which any such reduction could be effected, taking into consideration the administrative difficulties, if any.

(2) Whether the grant of a compulsory periodic rest of a calendar day should be allowed to all railway servants referred to in (1) above, including those designated as essentially intermittent

workers; if not, whether periodic rests in any other form are recommended.

(3) Whether the existing provisions regarding leave reserve are satisfactory, if not, the modifications required to provide reasonable facilities to railway servants to enjoy leave due to them.

(4) Whether the existing leave rules and other holiday concessions applicable to railway servants, who are daily-rated and/or in inferior service need liberalising and, if so, to what extent.

The Adjudicator heard at length, during an itinerary that occupied the greater period of the year under review, the parties concerned in the dispute (*viz.*, the Railway Administrations, representative of railway workers, Trade Unions on Railways and the All-India Railwaymen's Federation) and at the close of the year, the Adjudication proceedings had just reached their final stage.

In May 1946, the Government also announced the appointment of a Pay Commission to enquire into the conditions of service of all Central Government servants with particular reference to the adequacy of their pay scales and standards of remuneration. The Commission was composed of non-official members with Honourable Mr. Justice Srinivasa Varadachariar, Kt., Judge of the Federal Court, as Chairman. The following were the terms of reference of the Commission:—

To enquire into and report on—

(*a*) the conditions of service for the Class I, Class II and Subordinate Central Services as well as establishments now designated as inferior who are subject to the Civil Services (Classification, Control and Appeal) Rules or the Railway Services (Classification, Control and Appeal) Rules and Railway servants as defined in para. 101, State Railway Establishment Code, Volume I, with particular reference to:—

(i) the structure of their pay scales and standards of remuneration with the object of achieving rationalisation, simplification and uniformity to the fullest degree possible;

(ii) the extent to which the present leave terms should be altered and simplified; and

(iii) conditions of retirement and the extent to which the existing regulations in regard to pensions and contributory provident funds require simplification.

(*b*) the machinery for negotiating and setting questions relating to conditions of service which may arise out of the differences between Government and its employees.

(*c*) the principles on which the remuneration of industrial workers and daily-rated employees of Government should be based.

The Commission's sittings were held in Delhi and they heard among others, representatives of officers and staff and organised labour including representatives of the All-India Railwaymen's Federation. The Commission had not completed their deliberations at the close of the year under review.

(*b*) While the investigations of the Adjudicator and the Central Pay Commission were proceeding, notice of a general strike was served on Government by the All-India Railwaymen's Federation on 1st June 1946. The strike was to commence on the 27th June 1946 unless the demands of the Federation were conceded in the meanwhile.

At a special meeting between the Railway Board and the Federation held on the 29th May 1946 these demands were discussed. The main demands of the Federation were—

(i) that a salary of Rs. 60 per month be fixed as the minimum wage for railway workers.

(ii) that the lower scales of pay of subordinate staff be amalgamated; and that an interim increase of pay be given to railway employees pending the recommendation of the Central Pay Commission, referred to in para. 85 (*a*) above.

In view of their heavy financial implications, the demands were referred to the Standing Finance Committee for Railways and the recommendations of that Committee were discussed by the Railway Board with the Committee of Action of All-India Railwaymen's Federation in June 1946. As a result of these discussions, an interim relief of Rs. 4-8 per month per head to all railway employees drawing Rs. 250 per month and below was sanctioned and it was also agreed that no railway servant who was in service on 15th September 1945, *i.e.*, when the War in the East ended, would be discharged on becoming surplus unless he refused alternative employment; these orders were to remain effective till the report of the Adjudicator referred to in para. 85 (*a*) above had been considered. It was also decided to appoint a High Power Committee charged *inter alia* with suggesting practical methods of absorbing surplus staff. As a result of the grant of these concessions, the All-India Railwaymen's Federation called off the general strike on Railways which they had previously decided to launch from the 27th June 1946.

This settlement, however, did not prevent the occurrence of a general strike on the South Indian Railway. The trouble began with a lightning strike of workshop staff on the 23rd July 1946. On the 1st August 1946, the South Indian Railway Labour Union served on the Administration a notice of a general strike on some day between the 15th and 31st August. The notice was accompanied by a list of demands, many of which were covered by the terms of reference to the Adjudicator and the Central Pay Commission. Attempts to arrive at a settlement with the Labour Union proved to be of no avail. On the 11th August 1946, a strike notice was served on the Administration by the South Indian Railway Station Masters' Association, accompanied by a list of demands mostly similar to those of the Labour Union. The general strike commenced on the night of the 24th August 1946 and continued till the evening of the 22nd September 1946, when it was called off. The majority of the strikes had resumed duty long before the strike was actually called off, and the position returned to normal on the 26th September 1946. The maximum number of staff who participated in the strike was about 23,800.

(*c*) At the twenty-fifth half-yearly meeting with the Federation which took place on the 6th February 1947 the subjects discussed were:—

(i) the Industrial Employment (Standing Orders) Central Rules, 1946,

(ii) the question of extending service conditions as on Indian Government Railways to other Indian Railways,

(iii) (*a*) the question of compensation to railwaymen for expenses incurred in evacuating their families away from vulnerable areas during the period of war,

(*b*) claim for enhanced rates of military ration allowance to militarised staff with retrospective effect,

(iv) acting allowances to employees officiating in higher posts,

(v) conditions governing the Appendix III examination for promotion in the case of accounts staff,

(vi) the future of railway grainshops,

(vii) facilities for representatives of recognised unions to attend meetings of the unions and of the Federation, and

(viii) discharge of railway employees as a result of court convictions.

86. Grain and Grocery Shops.—The Railway Grainshop Organization —a review of which appeared in para. 92 of last year's report—continued to function satisfactorily during the year under report. The acute shortage of cereals in the country, which was mentioned in last year's report and which resulted in the general reduction of the scale of the cereal ration, continued during the year and it was necessary, therefore, to continue the measures adopted to make up the deficiency caused by the reduction of the scale of the cereal ration. These were :—

(i) sale of alternative foodstuffs at concessional rates such as maize, barley, dehydrated potatoes, as recommended by the Provincial Governments concerned;

(ii) increase of the ration of pulses from 4 seers to 6 seers per adult per month.

In addition to these measures, it was decided during the year under review, to increase the scale of the potato ration sold through Railway grainshops as a temporary measure till the end of June 1946, by 1½ seers per adult per month, the additional ration being subject to a maximum of 4 seers per family per month. Owing to the general scarcity of foodstuffs in the country, Railway Administrations experienced considerable difficulties in getting adequate supplies of commodities, *e.g.*, sugar, gur, mustard oil, pulses, for Railway grainshops.

At the close of the year, there were in all 773 grainshops, of which 587 were static and 186 mobile. The number of ration card holders who purchased foodstuffs, etc., at these grainshops during March 1947 was 971,000 and the average number of ration cards per month was 954,000 during the year. Foodstuffs to the extent of 19,275,000 maunds were sold by the shops during the year with an average of 1,606,000 maunds per month or 1·68 maunds per month per ration card holder. The amount realised by the sale of commodities through these grainshops during the year was about Rs. 21·0 crores at an average scale of about Rs. 1·75 crores per month or Rs. 18·3 per ration card holder per month. The expenditure on the purchase of the commodities sold during the year, however, amounted to about Rs. 37·3 crores so that the loss on sales incurred by affording relief in kind to the staff was approximately Rs. 16·3 crores. The relief afforded during the year to the staff employed on all Indian Government Railways assessed in terms of the difference between the railway selling prices and the local market prices was Rs. 19 crores with an average relief of Rs. 16·6 per ration card holder per month. The corresponding figures for 1945-46 were :—

Total relief	Rs. 15 crores
Relief per head	Rs. 13·7

The cost of the organization for the year under review was approximately Rs. 3·2 crores. The total cost of the scheme including loss on concessional sales during the year was, therefore, about Rs. 20 crores.

The facilities afforded by grainshops, as outlined above, continued to help greatly in stabilising the Railway servant's cost of living and to relieve him from the anxiety of his not being able to cope with the high prices of foodstuffs which prevailed in the markets, and also of the difficulties connected with the procurement of essential articles of foodstuffs.

Grocery Shops.—In October 1946, the working of the Grocery Shops Organization on Railways was further reviewed by the Railway Board, who came to the conclusion that in view of the continued improvement in the availability of imported stores in the market, the justification for continuing this organization no longer existed and orders were accordingly issued to Railways that the organization should be closed down by 31st March 1947. The grocery shops on Railways were accordingly closed down by the end of the financial year with the exception of one shop at Lahore (Reserve Depôt) which was allowed to continue to function for some time more to permit of its surplus stocks being disposed of.

87. Canteens.—As stated in last year's report, with a view to provide staff with cheap and wholesome meals and to meet the reduction in rations and also to improve the working conditions of workers, 8 Cooked Food Canteens were established during the year under review, mainly at workshops on Indian Government Railways, where tea and light refreshments were served, while in a few canteens full meals were also served. The total number of Railway servants, who were served in all these canteens with tea, snacks, etc., averaged 18,000 per day.

88. Dearness Allowance.—In paragraph 93 of last year's report, it was stated that the rates of dearness allowance remained the same as they stood on the 1st January 1945. In April 1946 the rates of dearness allowance drawn by railway servants were further reviewed, when the Railway Board came to the conclusion that some further relief should be given to Railway servants. Orders were accordingly issued to Railways on 10th April 1946 giving retrospective effect to the existing rates of dearness allowance from 1st July 1944 instead of from 1st January 1945. It was also decided to grant an additional allowance of Rs. 3 per month for the period from 1st July 1944 to 31st December 1944, to those non-gazetted Railway servants, who were drawing dearness allowance at certain minimum rates prescribed in the Railway Servants' Dearness Allowance Rules. Other non-gazetted railway servants were granted for the same period such part of the additional allowance of Rs. 3 as would, together with the allowance drawn, secure to them the following minima :—

Area.	Non Defence of India Units.	Defence of India Units.
	Rs. As.	Rs. As.
X	23 0 per mensem	15 0
A	22 0 per mensem	15 0
B	19 0 per mensem	13 8
C	17 0 per mensem	12 0

89. Railway staff and the war.—In paragraph 95 of last year's report it was stated that the situation in regard to the release of Railway staff from the Army improved considerably during the latter half of the year 1945-46. This improvement was maintained throughout the year under review with the result that only 7 Railway officers and 1,220 men were still working in the War Department on 31st March 1947.

The production of munitions in the Railway workshops was discontinued during the year under review. The scheme for the training of technical staff on behalf of the Labour Department was also abolished during this year. The total number of men who had completed their training in Railway workshops under this scheme was 16,293.

90. Railway Service Commissions.—(1) The North Western Railway Service Commission which was set up in July 1942 was made permanent in July 1946. Reference was made in the last year's report to the reluctance of candidates to travel long distances for interview at Lahore, and to the possibility of appointing an additional Member so that recruitment could be undertaken at selected centres away from Headquarters. An additional Member for this purpose was appointed during this year.

(2) It was decided during the year that similar Service Commissions should be established on other Indian Government Railways with their Headquarters as follows :—

Headquarters.	*Railways.*
Madras	Madras and Southern Mahratta and South Indian Railways.
Calcutta	Bengal Assam and Bengal Nagpur Railways.
Bombay	Bombay, Baroda and Central India and Great Indian Peninsula Railways.
Lucknow	East Indian and Oudh Tirhut Railways.

The Commission at Madras started functioning in February 1947, while the other Commissions were still under formation during the year under review.

The Railway Board decided that, in addition to the work of recruitment of subordinate staff, the work of advising General Managers on appeals received by them from subordinate staff should also be entrusted to the Service Commissions as an experimental measure for one year in the first instance. The North Western Railway Service Commission took over this work from January 1947.

91. Anti-corruption Organisation.—During the year under report the drive against bribery and corruption which had been carried on all Indian Government Railways since 1942 was continued vigorously by the Special Police Establishment. Specially selected senior railway subordinate staff continued to be associated with the Special Police and rendered assistance in collecting useful information regarding corruption among railway employees and in the investigation of railway cases, where technical matters were involved.

During the year under review, 97 cases were taken up by the Special Police, of which 68 were sent up for trial in courts or before Tribunals resulting in the conviction of 40 persons. This brings the total number of cases so far taken up, to 490, and the number of persons convicted to 223. 18 cases, in which the evidence was not considered sufficiently strong to secure the conviction of the railway employees concerned in a court of law, were referred to Railway Administrations for departmental action to bring home to the delinquents that the Administration had no place for those who indulged in corrupt practices. As a result 3 employees were discharged. In order to keep the public and the general body of the railway servants informed of the measures taken and the progress made in this behalf, press notes continued to be issued periodically, giving the number of convictions obtained. The attention of the public was drawn particularly to the fact that both the acceptor and the tenderer of bribes were liable to punishment under the law. In addition, the individual railways also continued to take action in this respect on their own initiative.

Towards the end of 1946 a stern warning was issued to the railway staff of all ranks that very severe action would be taken against any railway servant found guilty of having received illegal gratification or having indulged in corrupt practices.

In order to make the criminal law more effective in dealing with cases of bribery and corruption among public servants, the Prevention of Corruption Act, 1947 (Act II of 1947), was passed in February 1947, under which bribery was made a cognizable offence.

Special Complaints Sections were set up both in the Railway Board's Office and on Railways to effect the rapid disposal of complaints and enquiries. Complaints brought against the staff in connection with bribery and corruption thereby received prompt attention.

92. Labour Legislation.—In paragraph 97 of the report for the previous year reference was made to the Factories (Amendment) Act, 1945, which contained certain provisions for the grant of certain number of annual paid holidays for factory workers. It was also reported there that Provincial Governments would be approached with a view to securing exemption for railway factories from the provisions of the Amendment Act, having regard to the fact that under the leave rules applicable to railway employees, as liberalised subsequent to the date of enactment of the amending Act, railway workers governed by the Factories Act were eligible, on the whole, for leave on a more liberal scale than that provided in the Amendment Act. Further examination of the question by Government showed that benefits as provided in the Amendment Act should be specifically extended to the staff concerned; the matter was thus under examination of the Government towards the close of the year under review.

Three measures affecting labour were enacted during the year under review, namely the Factories (Amendment) Act, 1946, the Factories (Second Amendment) Act, 1946, and the Industrial Disputes Act, 1947. The first, the Factories (Amendment) Act, 1946, reduced the hours of work from 54 hours to 48 hours per week in the case of workers employed in perennial factories and from 60 hours to 50 hours per week in the case of workers employed in seasonal factories; and the daily hours of work, from 10 to 9 in the case of perennial factories, and from 11 to 10 in the case of seasonal factories. The rate of payment of overtime was also enhanced from one and a half times the ordinary rate of pay to twice the ordinary rate of pay.

The Factories (Second Amendment) Act, 1946, inserted a new section in the Act of 1934 authorising Provincial Governments to make rules requiring that in any specific factory where more than 250 workers were ordinarily employed an adequate canteen should be provided for the use of the workers and laid down what provisions the said rule might make.

As for the Industrial Disputes Act, 1947, which was enacted at the close of the year under review, it replaced the Trade Disputes Act, 1929, which had been the only permanent Central Legislative enactment for the settlement of trade disputes. Although the Trade Disputes Act provided for the appointment of Boards of Conciliation and Courts of Enquiry for the settlement of trade disputes, and forbade strikes and lock-outs in public utility undertakings without 14 days notice, it did not give power to the appropriate Government to enforce the findings of any authority which might be appointed under that Act to deal with trade disputes. Rule 81A of the Defence of India Rules however supplied the omission by providing that trade disputes could be referred to adjudicators with power vesting in the appropriate Government to enforce the Award of the Adjudicator on both parties for a specific period, and when that Rule lapsed in the middle of the year under review, its provisions were continued for a further period of 6 months by the Emergency Powers (Continuance) Ordinance, 1946. The need for some permanent legislative enactment before that ordinance expired led to the enactment of the Industrial Disputes Act, 1947. The essential features of the new Act are that conciliation is ordinarily compulsory in public utility services, and, strikes and lock-outs are prohibited during the pendency of proceeding, and till the findings of the Tribunal (the setting up of which is provided in the Act) could be enforced on both parties by the appropriate Government. Provision is also made in this Act for the setting up of Joint Works Committees consisting of representatives of employers and workers for internal settlement of disputes as far as possible. The point of particular significance to Railways is that in the new Act any Railway Service is a public utility service whereas under the repealed Trade Disputes Act the term "public utility service" covered only a railway service which, in the case of a Federal Railway, the Central Government, and in the case of any other railway, the Provincial Government, might by notification in the official gazette declare to be a public utility service for the purpose of that Act.

93. Staff Council.—Staff Councils, Welfare Committees and other similar bodies have been in existence on the various railways for a number of years. The Railway Board have considered it necessary to systematise the organisation and have issued rules during the year regulating the composition and functions of these bodies which thereafter are to be known as Staff Councils. Under the new rules, the functions of staff councils are as follows :—

(i) "To maintain good relations and a spirit of co-operation between the Administration and all classes of non-gazetted staff by providing a means whereby :—

(*a*) staff can bring questions in connection with their conditions of service to the notice of the Administration;

(*b*) matters of common interest connected with the working of the undertaking may be discussed with a view to improve efficiency."

(ii) "To function as relief committees to operate on the funds allotted for the purpose by the Staff Benefit Fund Committee at the discretion of the General Manager."

The franchise for these councils includes all permanent non-gazetted employees and of these, employees with more than three years continuous service are eligible for election to the Councils. Experience has shown that the more employees are encouraged to take an intelligent interest in the conduct of industrial undertakings, the more are they likely to identify themselves with schemes for improving the efficiency of the undertakings. It is hoped that the staff councils organised on railways along these lines will achieve this object.

CHAPTER VIII

AMENITIES FOR PASSENGERS

94. General.—No large scale programme for the provision of amenities for passengers during the year under review could be undertaken due to the scarcity of materials, non-return of a large number of coaching stock lent to the Defence Department and pre-occupation with immediate post-war problems. Within the means available, efforts were continued towards the relaxation of travel restrictions by providing additional passenger train services and through coaches and the provision of additional accommodation, particularly third class, on fast through trains and by taking other measures referred to in the following paragraphs :—

95. New third class carriages.—76 new third class bogie carriages conforming to the approved standard laid down in 1939 were constructed and placed in service as against 53 during the previous year.

96. Booking Offices and Out-Agencies.—Among the additional booking facilities provided for the travelling public during the year under review, was the appointment of women booking clerks on the South Indian Railway at Madras (Egmore) for the issue of tickets exclusively for women passengers. Further, town booking offices were opened at Trichinopoly and Karur on that railway. On the Great Indian Peninsula Railway, additional booking facilities were provided at Nagpur, Bhusawal and Jalgaon; besides, extra windows were opened at Poona for the booking of third class passengers and at Bombay (Victoria Terminus), Byculla and Dadar for first and second class military personnel. On the Madras and Southern Mahratta Railway, two booking offices, one at Kolhapur (for passengers and outward parcels traffic) and the other at George Town, Madras (for goods and parcels traffic) were opened. On the Bombay, Baroda and Central India Railway a separate booking window for the exclusive use of women passengers at Surat and additional booking windows to meet the increased traffic at different stations on the Bombay local section were also opened. On the Jodhpur Railway, one additional booking window for third class passengers at Jodhpur was provided. On the East Indian Railway, the booking office at Dhanbad station was extended and a new booking office was opened at the Branch Line platform. Temporary booking windows were also opened on different railways during important festivals, *melas*, etc., in addition to the re-opening of a number of train halts and stations which had been closed during the war. On the Bengal Nagpur and East Indian Railways, the opening of a further number of city booking offices and out-agencies was under investigation.

97. Waiting Rooms and Waiting Halls.—Some of the additional waiting rooms and waiting halls provided during the year under review are given below :—

Bengal Nagpur Railway.—

1. Upper class waiting rooms at Contai Road and extension of existing facilities at Chakulia station.
2. Extension of existing waiting halls at Anuppur and Tumsar Road, to make provision for ladies waiting room for 3rd class passengers.
3. Additions and alterations to station building at Dongargarh, Rajnandgaon, Bhalda Road, Onlajuri, Garumahisani and Rairangpur for giving additional waiting accommodation to passengers travelling in III class.
4. Replacement of bucket type latrines by septic tank ones near Pilgrim sheds at Puri and providing of septic tank latrines at Bilaspur, Gondia, Contai Road and Purulia.

Great Indian Peninsula Railway.—Upper class waiting rooms were re-opened for the use of the public at the following stations :—

Bargarh, Shankargarh, Majhgawan, Jukehi, Kareli, Sohagpur, Uruli, Loni, Kopergaon, Yeola and Gangapur.

South Indian Railway.—At Salem Junction improvements were carried out to the First and Second class gentlemen's waiting rooms and wall shelves and key boards were provided to the retiring rooms. Fireplaces were provided in the retiring rooms at Ootacamund.

Oudh Tirhut Railway.—A new waiting room at Chupra was constructed.

East Indian Railway.—Retiring rooms for *bonâ fide* passengers of all classes (2 rooms with 2 beds in each) were provided at Burdwan and improvements in the shape of septic tank latrine and baths were effected in the waiting rooms at Bhagalpur, Gushkara, Hathras Junction, Khetasarai and Rae Bareli.

Jodhpur Railway.—Zenana Passenger sheds at Tajpur Nasarpur Road and Dhoro Naro were provided.

Other minor improvements were the supply of additional benches, installation of additional taps, provision of sanitary fittings, etc.

98. Covered and raised platforms.—The following statements show the position at the end of the year 1946-47 in regard to platforms generally :—

Number of stations provided with covered platforms.

—	† B. A.	B. N.	Bk. S.	B., B. & C. I.	E. I.	G. I. P.	Jodhpur.	M. & S. M.	Mysore State.	H. E. H. the N. S.	† N. W. C.	† N. W. S.	O. T.	S. I.
1. Total number of stations open for passenger traffic.	796	569	111	600	739	554	171	499	127	209	858	176	451	581
(i) Class D (or flag) stations.	215	65	33	112	93	72	57	69	11	55	226	37	26	137
(ii) Other than class D (or flag) stations.	581	504	78	488	646	482	114	430	116	154	632	139	425	444
2. (i) Number of stations at which there are two or more platforms.	122	83	§	111	403	186	8	69	8	24	226	13	35	85
(ii) Total number of platforms at such stations.	304	176	§	281	995	444	27	183	18	58	533	30	88	224
(iii) Total number of covered platforms at such stations.	120	4	*Nil*	180	230	127	8	67	7	14	144	3	10	97
(iv) Percentage of (iii) to (ii).	39·5	2·3	*Nil*	64·1	23·1	25·4	29·6	36·6	38·9	24·1	27·0	10·0	13·9	43·3
3. (i) Number of stations other than class D at which there is only one platform.	466	430	§	399	260	296	106	361	108	130	429	131	390	359
(ii) Number of such stations at which there are covered platforms.	*Nil*	1	*Nil*	9	56	4	*Nil*	22	3	*Nil*	8	1	*Nil*	3
(iii) Percentage of (ii) to (i).	*Nil*	*Nil*	*Nil*	2·25	21·5	1·35	*Nil*	6·09	2·80	*Nil*	1·86	0·76	*Nil*	2·23

C. = Commercial. S. = Strategic.

† Fignres for the year 1945-46 adapted in absence of the proper returns from the reporting Railway.

§ Information not furnished by the Railway.

Number of stations provided with platforms above rail level.

—	† B. A.	B. N.	Bk. S.	B., B. & C. I.	E. I.	G. I. P.	Jodhpur.	M. & S. M.	† Mysore State.	H. E. H. the N. S.	† N. W. C.	† N. W. S.	O. T.	S. I.
1. Total number of stations open for passenger traffic.	796	569	111	600	739	554	171	499	127	209	858	176	451	581
(i) Class D (or flag) stations.	215	65	33	112	93	72	57	69	11	55	226	37	26	137
(ii) Other than class D (or flag) stations.	581	504	78	488	646	482	114	430	116	154	632	139	425	444
2. (i) Number of stations other than flag stations at which there are more than one platform.	115	76	3	101	383	189	8	69	8	24	213	13	27	85
(ii) Total number of platforms at such stations.	288	159	6	260	955	454	27	183	18	48	510	28	68	224
(iii) Total number of platforms at such stations above rail level.	197	133	3	244	607	432	20	163	11	48	387	23	55	153
(iv) Percentage of (iii) to (ii).	68·4	83·0	75·0	93·8	63·6	89·8	74·1	89·1	68·8	100·0	75·9	82·1	81·0	68·3
3. (i) Number of stations at which there is only one platform.	674	483	108	452	331	359	163	430	119	185	630	163	424	496
(ii) Number of such stations at which platforms are above rail level.	131	125	15	200	174	205	11	281	41	71	200	79	226	273
(iii) Percentage of (ii) to (i).	19·4	26·0	13·9	44·2	54·0	51·8	6·75	65·4	34·4	38·3	31·8	48·5	53·3	55·0

C. = Commercial. S. = Strategic.

† Figures for the year 1945-46 adapted in absence of the proper returns from the reporting Railway.

98.1. Additional Platforms and Sheds.—The following works on improvement or extension of existing platforms and provision of additional facilities were either completed or commenced during the year :—

The Up through platform at Dadar on the Bombay, Baroda and Central India Railway was extended to the standard length of 936 ft. On the Great Indian Peninsula Railway, the platforms and ramps at King's Circle were concreted. On the South Indian Railway the passenger platform at Kille was extended and that at Mettupaliyam improved. On the Jodhpur Railway new goods sheds and platforms were constructed at Tando Jan Mohammed and Digri. Work on improving platforms at 18 stations on the Madras and Southern Mahratta Railway was commenced.

99. Catering.—The acute shortage of foodstuffs, particularly wheat, other foodgrains and sugar, during the year under review, necessitated meals served in Railway Refreshment Rooms and Dining Cars being placed on an austerity basis.

The extension of the Bihar Food Adulteration Act to edibles sold at stations in Bihar continued to have a wholesome effect in maintaining a good standard in the quality of articles vended.

Checks by traffic and medical officers of railways on the quality of food supplied to passengers and on the cleanliness of its preparation continued to be made.

Additional catering facilities were provided as necessary.

100. Supply of drinking water.—At larger stations drinking water was available from hydrants or "gharras" mounted on wheeled barrows. At smaller stations shelters were erected and "gharras" and "mutkas" with cool water were kept therein. Cold drinking water storage tanks were also provided on passenger platforms at a few stations. Permanent watermen were located at a large number of stations and additional temporary men were provided at other stations during the hot weather.

Certain Railways introduced and others proposed to introduce when train accommodation permitted, a scheme for the carriage of water and travelling watermen in III Class Compartments on long distance trains, with the object of serving water to passengers at halts.

101. Cleanliness of Coaching Stock.—The question of cleanliness of coaching stock continued to receive the active attention of railways during the year under review.

102. Better type of lavatories for third class coaches.—On the South Indian Railway enamelled cast iron latrine pans have been adopted instead of ordinary cast iron pans previously in use. The lavatory windows of recent construction were provided with ground glass shutters. A fixed hat and coat hook was also provided in each III class lavatory.

On the Bombay, Baroda and Central India Railway, all third class lavatories are provided with a minimum floor area of 12 square feet and ample natural ventilation and light. The floors and walls up to waist height are finished with Decolite.

The Jodhpur Railway have prepared designs for bigger latrines for third class coaches, but have not been able to build them due to shortage of materials.

In connection with design of the proposed 11′-8″ wide stock, the question of improvements in the design and fittings of lavatories in III class coaches was under consideration of the Board.

CHAPTER IX

ACCIDENTS

103. Major Accidents.—The following are the details of major accidents which occurred during the year :—

On 28th July 1946, while No. 90 Down Lucknow-Katihar Passenger was standing on the platform line at Bhatni Junction on the Katihar-Lucknow main line section of the Oudh Tirhut Railway, No. 73 Down Gorakhpur-Allahabad Passenger entered the same line and ran into the rear of 90 Down. The last four bogies of 90 Down were badly smashed. 24 persons were killed and 23 injured. The approximate cost of damage to rolling stock was Rs. 48,000.

On 9th September 1946, while No. 10 Down Surma Mail was running between Brahmanbaria and Talshahar stations on the Akhaura-Bhairab Bazar section of the Bengal Assam Railway, its engine and 3 leading coaches derailed and rolled down the bank. 8 persons were killed and 32 injured. The accident was caused by deliberate tampering with the track by some person or persons unknown.

On 20th September 1946, while No. 10 Down Surma Mail was running between the Up Home and Outer signals of Ashuganj station on the Akhaura-Bhairab Bazar section of the Bengal Assam Railway, its engine and three leading coaches derailed and capsized. 4 persons were killed and 19 injured. The accident was caused by deliberate tampering with the track by some person or persons unknown.

On 23rd September 1946, while No. 1 Up Katihar-Lucknow Express was entering the curve at mile 185/13 between Dighwara and Baragopal stations on the Sonepore-Chupra section of the Oudh Tirhut Railway, its engine and three leading coaches derailed and the engine capsized. 27 persons were killed and 44 injured. The accident was caused by deliberate tampering with the track by some person or persons unknown.

On 4th October 1946, while the engine of 424 Up Goods with a portion of its train consisting of 13 wagons behind it was taking water at the water column on line No. 2 at Ongole station on the Madras-Calcutta main line of the Madras and Southern Mahratta Railway, No. 1 Down Madras-Calcutta Mail entered the same line from the opposite direction and collided head on. The engine of 1 Down canted over and the first three vehicles behind it telescoped into each other. 38 persons were killed and 87 injured. The approximate cost of damage to rolling stock was Rs. 71,000.

On 6th November 1946, while No. 3 Down Frontier Mail was approaching Delhi Junction from New Delhi, No. 1 Up Bombay, Baroda and Central India Metre Gauge Mail from Delhi Junction collided with 3 Down at the Broad and Metre Gauge Diamond Crossing near Dufferin Bridge in Delhi Junction yard. The engine of 3 Down Mail derailed and 3 bogies on 1 Up were badly damaged. One person was killed and 23 injured. The approximate cost of damage to rolling stock was Rs. 71,000.

104. Review of Accident Statistics.—(*a*) The following Table shows the number of passengers, railway servants and other persons killed and

injured in accidents on Indian Railways, exclusive of casualties in Railway workshops, during the year 1946-47 as compared with the previous year :—

Cause.	Killed.		Injured.	
	1945-46.	**1946-47.**	1945-46.	**1946-47.**
A. Passengers.				
(i) In accidents to trains, rolling stock, permanent way, etc.	89	**103**	253	**375**
(ii) In accidents caused by movements of trains and railway vehicles exclusive of train accidents.	716	**707**	2,309	**3,002**
(iii) In accidents on railway premises in which the movement of trains, vehicles, etc., was not concerned.	..	**4**	4	**11**
TOTAL	805	**814**	2,566	**3,388**
B. Railway servants.				
(i) In accidents to trains, rolling stock, permanent way, etc.	53	**33**	211	**247**
(ii) In accidents caused by movements of trains and railway vehicles exclusive of train accidents.	286	**265**	7,384	**7,993**
(iii) In accidents on railway premises in which the movement of trains, vehicles, etc., was not concerned.	42	**31**	19,565	**21,249**
TOTAL .	381	**329**	27,160	**29,489**
C. Other than passengers and railway servants.				
(i) In accidents to trains, rolling stock, permanent way, etc.	64	**41**	153	**95**
(ii) In accidents caused by movement of trains and railway vehicles exclusive of train accidents.	3,167	**3,270**	1,017	**1,402**
(iii) In accidents on railway premises in which the movement of trains, vehicles, etc., was not concerned.	21	**15**	116	**114**
TOTAL .	3,252	**3,326**	1,286	**1,611**
GRAND TOTAL .	4,438	**4,469**	31,012	**34,488**

(*b*) Of the total of **4,469** persons killed, **3,326** or **74** per cent. were other than passengers and railway servants and of this number 2,885 were trespassers and 330 were reported to be suicides.

Furthermore, 50 persons were killed on railway premises otherwise than during the movement of traffic, vehicles, etc.

(*c*) As compared with the previous year :—

(i) the number of passengers killed in accidents to trains, rolling stock, permanent way, etc., increased by **14**, as a result of increase in the number of casualties in accidents due to train wrecking.

(ii) the number of persons other than passengers and railway servants killed increased by **103** in accidents caused by movements of trains and railway vehicles, other than train accidents, due principally to an increase in the number of trespassers.

In considering these figures it should be borne in mind that there was an increase of about 11·7 millions in passenger and mixed train miles as compared with the previous year. The following statement shows the number of passengers killed and injured in train accidents only, *i.e.*, collisions,

derailment, etc., during the last five years as compared with the number carried :—

Year.	Number of passengers carried (in millions). *	Killed.		Injured.	
		Number. †	Per million passengers carried.	Number. †	Per million passengers carried.
1942—43	653	26	0·04	250	0·38
1943—44	828	170	0·21	493	0·60
1944—45	971	34	0·04	132	0·14
1945—46	1,093	89	0·08	253	0·23
1946—47	**1,189**	**93**	**0·08**	**340**	**0·29**

* Represents total number carried on all railways.
† Excludes train wrecking and attempted train wrecking.

(*d*) On Class I Railways, the number of railway servants killed in accidents due to the movement of trains, railway vehicles, etc., exclusive of train accidents, decreased by 16 while the number injured increased by 620. The following table analyses the main causes for these accidents :—

Cause.	Killed.		Injured.	
	1945-46	**1946-47**	1945-46	**1946-47**
(i) Misadventure or accidental . . .	216	**209**	6,948	**7,465**
(ii) Want of caution or misconduct on the part of the injured person.	55	**49**	294	**399**
(iii) Want of caution or breach of rules, etc., on the part of servants other than the persons injured.	4	**1**	58	**56**
TOTAL .	275	**259**	7,300	**7,920**

(*e*) The following statement analyses the accidents which occurred during the last two years, grouped under certain principal heads. A statement showing the accidents in greater detail for each Railway will be found in Appendix D of Volume II of this Report :—

	1945-46.	**1946-47.**
1. Derailments not involving passenger trains	8,902	**9,609**
2. Running over cattle	4,508	**5,066**
3. Accidents due to failure of engines owing to faulty material, workmanship and operation arising from the working of the running staff	4,001	**3,374**
4. Accidents due to failure of couplings and draw gear	3,181	**2,494**
5. Accidents due to failure of engines owing to faulty material and workmanship in the Mechanical Department . .	1,233	**1,861**
6. Accidents due to other rolling stock failures	347	**636**
7. Derailments of passenger trains . .	288	**396**
8. Fires in trains at stations or bridges .	577	**368**
9. Broken rails	202	**211**
10. Collision involving goods trains or goods vehicles	177	**193**
11. Slips in cuttings or embankments . .	80	**165**
12. Flooding of portions of permanent way .	94	**159**

13. Accidents due to failure of axles . .	125	139
14. Attempted train wrecking . . .	66	126
15. Running over obstructions (other than those included under "Train Wrecking", "Attempted Train Wrecking" and "Trains running into road traffic at level-crossings")	149	126
16. Trains running into road traffic at level crossings	150	116
17. Passenger trains running in the wrong directions through points but not derailed	52	73
18. Collisions between light engines . .	67	60
19. Collisions involving passenger trains .	73	51
20. Accidents due to failure of tyres and wheels	76	50
21. Accidents due to failure of brake apparatus	61	44
22. Train wrecking	12	19
23. Failure of tunnels, bridges, viaducts, culverts, etc.	4	6
24. Miscellaneous	393	275
TOTAL .	24,818	25,617

(*f*) The total number of accidents shows an increase of 799 as compared with the previous year against an increase in the total train miles of 7·8 millions.

(i) Derailments not involving passenger trains still account for the largest number of accidents in any one category, *i.e.*, 38 per cent. of the whole. Next in order are:—

	Per cent.
Running over cattle	20
Accidents due to failure of engines due to faulty material, workmanship and operation arising from the working of the running staff	13
Accidents due to failure of couplings and draw gear . .	10
Accidents due to failure of engines owing to faulty material and workmanship in the Mechanical Department . . .	7
Accidents due to other rolling stock failures . . .	3
Derailments of passenger trains	2
Fires in trains or at stations or bridges	1
Broken rails	1

(ii) Accidents in railway workshops accounted for the death of 13 and injuries to 17,201 railway servants or an increase of 2 and 2,505 respectively.

APPENDIX A.

GRAPHS